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GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

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THE "GRAND (FACTORY) TOUR."

YEARS ago the education of no young man was considered complete until he had taken the "grand tour." In this visiting of foreign countries he was supposed to lose his narrow views, and to broaden out into a polished, fair minded, all-round gentleman, fitted to adorn polite society and able to devote his life to the art of entertaining or being entertained,—the then recognized chief end of man. To-day, with everything in life industrialized, the grand tour is still taken, and is still of great value, but its pathway leads not through parlor, rout, or boudoir, but through store, agency, and factory. It is surprising and gratifying to notice how many young men, sons or relatives of foreign manufacturers, visit other countries to meet the leaders in the trade. In the rubber trade, for example, during the year past, a round dozen of young men who expect some day to be at the heads of rubber companies in England, Germany, and other European countries, have come to the United States provided with letters of introduction and have visited many rubber factories, extending always an invitation to those who entertain them to visit their works in turn. Few of those visits are returned, however. Perhaps in part it is because we are too busy to attend to it, but really because we are apt to feel that here we have the best and that the foreigner can teach us nothing. In business, however, as in all else, self-satisfaction is the end of progress. It shuts one's eyes most effectually to what is patent to all the world beside. A sign of breadth of view and of an appreciation of the business as a whole will be the acceptance of invitations to go abroad, visit factories when it is permitted, and a friendly exchange of opinions, processes, and compounds—in fact about everything that is in the common interest. Granted that the envoy sent be young, capable, energetic, such a trip will add to his value to his employers many times the cost of the trip.

RUBBER AND SOME OTHER CROPS.

JUST now, when American seedsmen and nurserymen are distributing their trade catalogues for the new year, there comes to us from Ceylon a list of seeds and plants which, although extensive and varied, scarcely embraces one species suited for planting in our colder latitude. The vulgar names of these plants are familiar everywhere, but their produce is such as would, in the United States or Europe, be looked for at the grocer's, or the chemist's—or almost anywhere else than on a nearby farm. Such things are included as coffee, tea, cacao, vanilla, pepper, cinnamon, pineapples, cinchona, and the like. The yield of these tropical staple crops now has a commercial value of hundreds of millions of dollars annually, the greater part of which has been the result of modern development in agriculture.

The Ceylon catalogue referred to has come to include also various species of India-rubber and Gutta-percha, no longer as curious novelties, but for planting on a large scale for their economic value. In one sense every page

of it may be regarded as an argument for rubber planting, though issued with no such apparent intent. Not only is there hope, in the history of the domestication of these other tropical species of plant growth, that corresponding success may be attained in rubber cultivation, but positive encouragement has resulted from experiments with rubber itself. It appears advisable at least to plant any rubber producing species of value, in the countries to which it is indigenous, as for instance, the *Castilloa elastica* in Mexico.

Another idea suggested by this list of tropical plants—the cultivation of many of which has been confined to the Eastern hemisphere—is that they might be grown profitably in corresponding latitudes in the new world. Coffee succeeds in Mexico, as do cacao, vanilla, and pineapples. Why should not many or all the other tropical plants of economic value? The years required for rubber trees to become productive are, at least to American ways of thinking, a long time to have capital tied up without yielding a return, and doubtless the practice of planting “short crops” in connection with rubber, to afford a quicker income, will become general. Besides, many planters of rubber on this continent already have shown a preference for diversified crops, over having “all their eggs in one basket.”

For these several reasons, a study of tropical planting in general ought to be of interest to the great number of persons, of large and small means, who are investing in rubber and coffee culture in Mexico. Such an interest would be promoted, and the whole foreign planting element in Mexico ought to be benefited, by the establishment in that country of such an agricultural experiment station as has been suggested of late by Mr. James C. Harvey, a rubber planter in the state of Vera Cruz whose name is familiar to INDIA RUBBER WORLD readers.

THE AMERICAN “WONDER MACHINE.”

FACTS may be ignored, misunderstood, argued out of existence, apparently annihilated, but they still remain. THE INDIA RUBBER WORLD believes the new rubber shoe machine to be a fact. The *Gummi-Zeitung* does not believe it. To sum up its conclusions, published at length in another column, they are about as follows:

- “It is doubtful.”
- “It is impossible.”
- “It is possible.”
- “It cannot be done.”
- “It has not been done.”
- “Let us watch and wait.”

It is but fair to our esteemed contemporary to acknowledge that the subject has been treated by it with courtesy, good nature, and honesty, an attitude contagious to the last degree, and it is in the same spirit that this brief answer is indited.

The “wonder machine” was not mentioned by us with the wish to alarm any one. It was news matter pure and simple, of present and paramount interest. Changes in manufacture, in machinery, in product, have always been announced in THE INDIA RUBBER WORLD as early as it was possible to get the facts, and this in the interest of all

concerned. Such facts are always carefully verified and are not published until that is done. If the “American cousin” is an incorrigible optimist, is not the German cousin an equally incorrigible pessimist? And while he may often have been wise in keeping out of some “unlucky inventions” and “revolutionizing improvements,” has he not lost much by an inability to discriminate between the unreal and the real, the lucky and the unlucky?

There is no question that the Americans in the past have praised the hand made rubber shoes—extolled their fit and beauty, boasted of their factory methods, etc. And well they might, for they were the best as compared with all others, the proof of this being that the whole world imitated them. But is it necessary to point out that excellence is only a comparative term? Gutenberg’s printing press turned out “beautiful” work at a speed that paralyzed the copyists, and that won the most extravagant praise from all, but beside modern press work how do his books stand to-day? From a typographical standpoint are they not “abortions”? Or to bring the comparison into our own trade and times, take the old fashioned rubber belt, made wholly by hand, cured in open steam; was it not advertised as a marvel? Would it sell to-day by the side of the product that comes from the belt machine, the belt press, and the hydraulic stretcher? Would it not be termed a relic of the middle ages?

If the rubber shoe manufacture of Europe is perfectly satisfactory to the *Gummi-Zeitung*, it certainly is not to those who have their capital invested in it, for nearly every company beyond the Atlantic has written to THE INDIA RUBBER WORLD, showing the most profound interest and asking for further information.

In spite of the fact that, in the first part of the article under consideration, the *Gummi-Zeitung* doubts that such a “wonder machine” exists, it acknowledges further along that it is possible that it produces a cheaper shoe of more pleasing appearance, but says it cannot have the durability of those that are hand made. Yet the fact is that on the testing machine the machine made shoes have proved far more durable than the hand made, even when made of cheaper stock. Suppose for the sake of argument, however, that the same compounds be used in each, would not a more beautiful, cheaper, and more valuable product be the result, and is not that demonstrable with mathematical precision? Again, the suggestion that the hand made shoe will possess more solidity than one made by machinery is in direct contradiction of practical experience in the use of plastic materials. It should be patent to any one familiar with rubber manufacture that the pressure of the hand roller applied by man, woman, or boy, cannot anywhere equal mechanical pressure such as can be exercised by machine. Nor will the hand work be as thoroughly welded and as homogeneous as the machine work. This is proved in hundreds of instances in every day rubber manufacture.

Further, our contemporary gathers that in the new process the rubber is “sprayed” on, or “softened” beforehand, and then subjected to the cold cure. In this he is so far astray that we would suggest that he read our arti-

cle once again and see if every statement does not point to vulcanization by heat. To be plain, the rubber is not sprayed on, it is not softened, except on the mixing mill or calender, and it is not cold cured or vapor cured; hence the point made that cold cured goods are less durable than heat cured is entirely foreign in this discussion.

The citation of failure regarding the "revolution in the machinery for tire making" is peculiarly apt, for after the most searching and exhaustive tests those same revolutionary machines are now being shipped to Europe and will shortly be in use in England, France, Germany, and Russia.

With regard to German patents "issued to Mr. Joseph O. Stokes" there is another misunderstanding. The gentleman named, as far as we know, is not the patentee here or abroad. He is rather the visible and active head of a syndicate that controls the United States patents. THE INDIA RUBBER WORLD has been promised early information concerning patents for machinery and processes, both in the United States and Europe, and as soon as that is secured will gladly forward to its friends in Germany the information that they are seeking.

Our esteemed contemporary's position reminds us of an anecdote. Once upon a time a man was arrested and put in jail. As soon as possible he sent for his lawyer, who, standing outside of his cell, heard his story, and then exclaimed, "Why they can't put you in jail for that!"

"But," said the other, "whether they can or not, I'm here."

The Shoe Machine is here.

THE INFLUENCE OF SUGGESTION.

SO many large and enterprising manufacturers, both in and out of the rubber trade, have made a special feature of their own fire brigades, furnishing them with comfortable quarters, drilling them, and showing them off to visitors, that it is a bit of a surprise to find that the insurance experts do not look upon them as an unmixed good. According to their statistics, there is a tendency toward unaccountable fires where such organizations are existent, rather than where they are absent. The reason for this is given that their presence suggests to the evil minded and to the irresponsible lovers of excitement the desirability of occasional conflagrations. The experts, therefore, are pronounced in their belief that it is better to rely upon brick walls, tinued doors, cleanliness, sprinklers, and a good outside fire department.

COINCIDENT FACTS OF INTEREST are that the exports of American rubber footwear are increasing rapidly and that the range of heavy snowfall in Europe appears of late years to be widening. Perhaps after awhile it will not matter much to our rubber manufacturers where snow falls—they will supply the needed rubbers just the same.

THE FIRST AMERICAN PACIFIC CABLE is being manufactured abroad, but already an order had been placed with an American factory for 472 miles of submarine cable, by a foreign government. In view of the successful working of greater lengths

of deep sea cable than this, supplied by each of two American factories, it seems reasonable to expect that the cable industry will yet become established on an important scale on this side of the Atlantic.

NOTHING REFLECTS GENERAL INDUSTRIAL PROSPERITY more truly than the condition of the belting business. It is of more than passing interest, therefore, to note that of late almost all of the large manufacturers of both rubber and cotton belting have been forced to run their plants up to their limit, and it is also probable that more large belt presses have been installed during 1901 than in any other single year. Rubber belting to-day is made so well and is so generally useful that it is crowding leather belting very hard. Indeed, one rubber manufacturer predicted recently that the time will come when leather belting will be seen as rarely as leather hose.

THE CHARTER OF THE ATLANTIC RUBBER SHOE CO., mentioned in another column, marks an era in the incorporation of stock companies. It is a radical departure from all previous charters in that it not only more fully recognizes the rights of the stockholder, but gives to him the fullest information concerning the condition of the company of which he is a part owner. That the new company is a trust, or that it is formed to amalgamate existing rubber shoe companies, or fight the "Rubber Trust," is pointedly denied by the incorporators.

OUR FRIENDS OF THE LONDON *India-Rubber Journal* take to heart too seriously our failure to view through spectacles as optimistic as their own the prospects of a new Bolivian rubber exploiting enterprise which, in other channels more than in our contemporary's columns, has been treated as a coming great "monopoly." Our own treatment of the matter was to deprecate any idea of a monopoly being possible in the quarter referred to. Besides, it is difficult to treat seriously any article which drags in the "Rubber Trust" as a factor in any development in rubber, whether in forest or factory. No other journal has devoted more space than THE INDIA RUBBER WORLD to the rubber resources of Bolivia, and no other journal has contained so much definite information on this subject. Bolivia undoubtedly contains a wealth of rubber, and no supplies of good rubber can be too remote for their exploitation ultimately, when the more available supplies have become inadequate for the demand. But these considerations are not new to our capitalists, and we yet fail to see any reason, in current developments, for manufacturers to begin to figure on lower priced fine rubber from Bolivia in the near future.

TO IMPROVE CONAKRY RUBBERS.

IN view of the depreciation which has been evident for some time past in the quality, and consequently in the selling price, of rubber coming from French Guinea, the commission of commerce and agriculture of that colony has adopted some regulations which appear in the *Bulletin de la Société d'Etudes Coloniales*. The adulteration of rubber is prohibited after August 1, 1901. Adulterated rubbers are such as are weighted with water, or obtained from roots, or such as contain glue or any other foreign substance, apart from particles of bark that may have become mixed with the rubber in coagulation, not to exceed the proportion of 1 per cent. of the total weight. The customs officials are charged with the enforcement of these regulations. It is hoped that, by this means, the Conakry rubbers will regain the reputation which they enjoyed formerly in the European markets.

GUTTA-PERCHA IN THE PHILIPPINES.

THE letter on this subject by Mr. F. J. Dunleavy, of Catobatto, island of Mindanao, which appeared in THE INDIA RUBBER WORLD of November 1, is confirmed in its more important details by the report of the United States Philippines Commission to the secretary of war, for the period from December 1, 1900, to October 15, 1901. Mr. Dunleavy stated that considerable quantities of Gutta-percha were being exported surreptitiously by Chinese traders from the port of Jolo to Singapore. The point of chief interest was not that the government was being defrauded of revenue—for that abuse was capable of being checked—but that the extent of the shipments indicated the existence of important quantities of Gutta-percha in Mindanao. On this latter point the commissioners are thoroughly convinced, and it is evident that they regard it worth while to exert all the influence of the government to protect the native trees, while stimulating the extraction of Gutta-percha, and ultimately to encourage planting.

The statement is made that the species *Dichopsis gutta*—known in the Malay peninsula as "getah taban," and which is the source of the best Gutta-percha—has not yet been found in the Philippines. But it might be observed that the greater portion of the Gutta-percha of commerce is yielded by other species than the one named. The price obtained at Singapore for the Philippines Gutta, as prepared by the Chinese, has ranged from \$40 to \$180 Mexican per picul [=30 cents to \$1.13 gold per pound], according to quality. The report mentions also the existence in the Philippines of rubber producing trees, and particularly of a giant rubber creeper, but these had not been botanically identified.

[An appendix to the report, not yet in print, will contain the results of an expedition to the Gutta producing districts of Borneo, Java, and the Malay peninsula, by Dr. P. L. Sherman, as agent of the Philippines forestry bureau. It was part of his mission to study the methods of extracting Gutta, and to become familiar with the various species in order to be able to identify those found in the Philippines. From what can be learned in regard to Dr. Sherman's report, it promises to be an important contribution to the literature of Gutta-percha.]

MORE ABOUT "THE BOLIVIAN COMPANY."

WE have further details regarding the "great deal," involving the control of the Bolivian rubber fields, about which *The India-Rubber Journal* (London) recently presented "information of such an astonishing character." It does not appear probable, however, that the supplies or prices of rubber will be affected, in consequence of this movement, for a good while in future. The nature of Sir Martin Conway's interest in Bolivia has been referred to already in THE INDIA RUBBER WORLD, and the company named in our headline is an outgrowth of this interest. The *South American Journal* (London), by the way, recently mentioned the following New York bankers and capitalists as interested in the enterprise; Brown Brothers & Co., Frederick P. Olcott, Hamilton McK. Twombly, Frederick W. Whitridge, John R. Hegeman, Richard J. Cross, William A. Read, Adrian Iselin, Roosevelt & Son, George Bliss, and August Belmont. By inquiry of some of the parties named it was learned that they were concerned in the Bolivian Co., but for particulars THE INDIA RUBBER WORLD was referred to a firm of counsellors at law, who, on December 11, favored us with this statement:

We beg to say that a small syndicate was formed here in pursuance of Sir Martin Conway's explorations and reports, for the purpose of

undertaking certain explorations in Bolivia, particularly in the rubber bearing regions, and a company was incorporated under the laws of West Virginia some time last spring—we do not recall the exact date—for the purpose of raising the capital for the syndicate operations and, in case the report should be favorable, of undertaking some development. The thing is of a very modest character, but very good people are interested in it. It seems hardly worth mentioning, but there is no objection to your printing a copy of the articles of incorporation, if you care to do so.

The date of incorporation of the company in West Virginia was January 25, 1901. The declared objects are to acquire real estate and other property in Bolivia and elsewhere in South America, to develop mines, exploit natural products, and create or control means of transportation. The authorized capital is \$1,000,000, though the initial issue comprises but one \$100 share each to the five signers of the incorporation papers—who evidently are all attached to the office of the legal firm above quoted. The principal office is to be maintained in New York, and the corporation is to exist until January 22, 1951.

Lately the point was raised that the government of Peru claimed that the lands on which Sir Martin Conway holds a concession were located in territory disputed between Peru and Bolivia. On December 23 the Bolivian congress adjourned without sanctioning a treaty of arbitration of the boundary dispute with Peru, but it is reported from La Paz that at secret sessions of the congress the contract with The Bolivian Co. was ratified.

It would seem, from all the above, that, although the New York parties named are of the highest standing, and although the Bolivian concessions are undoubtedly rich in rubber, much remains to be done in developing Sir Martin Conway's very interesting plans.

LARGE BALATA YIELD OF VENEZUELA.

SOME unexpectedly large figures respecting the output of Venezuelan Balata appear in the journal *El Guayánés*, of Upata, in that republic. During the twelve months ending with October last, according to that paper, 1,840,000 kilograms [=4,048,000 pounds] of Balata were shipped from the ports of San Félix and Guri, in the territory of Yuruary, to Ciudad Bolívar. This district lies south of the Orinoco and east of its tributary, the Caroni, besides which the region is drained in part by the Yuruary and Imataca rivers. This Balata paid a tax to the state of Bolívar equal to about 4 cents gold per kilogram (the rate has since been doubled), and 2 cents to the national treasury of Venezuela. Besides, there were \$772 collected in company taxes, fees, etc. The total public revenue from Balata was \$11,425.60. The export value of the Balata, according to *El Guayánés*, was equivalent on an average to 38 cents, gold, per pound, bringing the total value for twelve months up to \$1,538,200.

A VALUED COMPLIMENT FROM GERMANY.

THE INDIA RUBBER WORLD, of New York, our esteemed contemporary in the rubber industry across the seas, completed lately the twelfth year of its existence and commenced its twenty-fifth volume. This excellent trade journal is especially proud, and with good reason, of the fact that so few changes have occurred in its organization during these twelve years. Its founder, editor, and name, and the high character of its contents have remained the same. We hail our flourishing contemporary with a cordial "ad multos annos."—*Gummi-Zeitung* (Dresden).

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

ALTHOUGH, to the bulk of those who visit the Stanley and National shows held every November in London, the cycle itself rather than the tire alone is the main objective, the reverse is the case with the present writer, whose attention on these occasions is fixed only on the rubber in order to find out anything of novelty or special interest. In this respect it cannot be said that enthusiastic explorers have this year found much to compensate them for their zeal, objects and species already known to science—to borrow a naturalist's phrase—being in far greater prominence than novelties, though of course this state of affairs is only what may be premised in an application of rubber which is not by any means in the first blush of youth. But to leave the general for the particular, the rubber companies who had stands at the National Show, at the Crystal Palace, were The Dunlop Rubber Co., The Avon Rubber Co., and Capon Heaton & Co. The Avon company had on view a good assortment of their manufactures—cab, cycle, and motor tires naturally holding a prominent position. The "Coronation" motor tire now being made by them has the advantage over the ordinary type of solid tire in that it is molded endless instead of in straight lengths. There is thus no tension on the thread, and consequently, when the rubber is cut, the gashes close up instead of stretching open, as in the case of the ordinary form of tire. They have also a new rubber tread for building and repairing motor tires, which, being molded of a similar shape to that of a tire when inflated, is claimed to be much more durable than a flat tread, and to be also more easily fitted. The Dunlop company had on distribution an attractive booklet giving details of their tire, together with a compendium of information which must prove of considerable utility to riders. In motor tires, the Dunlop-Welch multiflex light motor tire was prominent, but the heavy vehicle tires do not yet seem to have been made by the company, and, though there were plenty of these to be seen up and down the show on motor cars, they all bore the well-known Michelin inscription, in addition to the "Clipper" stamp. The show, though primarily intended for cycles, has this year developed largely into a motor show, though the little vehicles are to have their own special show in the course of a few months. Monster "biscuits" of Pará rubber were in evidence at many of the exhibits, and, apropos of this tendency to enlighten the public as to matters of detail, a rubber works manager informs me that there has been quite a brisk inquiry for large "biscuits" of Pará to use for show purposes. According to the booklets issued by various firms Pará rubber is the only brand which is known to or at any rate utilized by tire makers. Into the truth of this contention I shall not stay to inquire, but it quite knocks in the head the statements of those interested in African produce that the tire trade has proved a stimulus to the gathering of rubber. What seemed to be the chief attraction of the show was the "Self-Inflating" tire, exhibitions of the action of which were given at frequent intervals of the day by The New Self-Inflating Appliances and Tyre Co., Limited, 12, Great Dover street, Borough, London, S. E. Something on the principle of the locomotive which fills its exhausted tank from a trough when in motion, this tire, to put the facts briefly, in its action when rolling along the road pumps in air enough to keep it inflated, losses of air by punc-

ture being almost immediately put right. Not quite so much of a novelty is the patent self-sealing air-tube which has been before the public for three or four seasons already. In this device the property of the Self-Sealing Air Chamber Co., Limited, of Hinckley street, Birmingham, the effect is produced by a thin strip of highly compressed vulcanized rubber which is securely fastened to the inside surface of the upper portion of the air-tube which comes into contact with the tire cover. E. G. Wood, of Wolf street, Stoke-on-Trent, showed his patent self gripping fabric tires, one of the most important parts of which consists of a circumferential ribbed fabric flap encasing the inner tube, which, under inflation, engages with the fabric of the outer cover, producing thus a firm grip easy of manipulation. A specialty about the canvas is that it is spun on mandrils to the shape of the tire, there being thus no distorting when the tire is made up. Exhaustion of space permits only bare reference to the fact that the "Velox" tires of the New Amalgamated Tyre, Limited, of Parkside, Coventry, made a good show, and that the Triumph Cycle Co., Limited, of Coventry, had on distribution a well got-up booklet dealing fully with the development and present position of military cycling, the cyclist being now recognized as an important unit in a field force.

AT the present time, to an extent never equalled in previous periods of the world's history, humanitarian sentiments with regard to the dangers experienced by the working classes in their various occupations are being expressed by people who have not been accustomed to bother themselves about what is outside their own province. Articles written on the "white slaves of England," who are engaged in more or less health destroying operations have attracted much attention to what is undoubtedly a social evil. Up to recently the natural history of rubber cannot be said to have been at all familiar to the person of average attainments or reflective nature in Great Britain, but of late I have noticed that the subject has come to be discussed in a much larger area than that which is circumscribed by trade interest. This is of course directly traceable to the Press. Mr. Baring-Gould, in one of his recent novels showing up the evils of the pottery trade, has taken the opportunity to bring home to cyclists the intensity of the annual death roll experienced by the South American rubber gatherers, while our daily papers have had articles under the head line "Congo Horrors," the iniquitous rubber traffic, etc. No doubt there is a good deal that needs showing up in the methods adopted by the rubber concessionists of the Congo, and now that public interest has been aroused it is unlikely that methods of barbarism will be allowed to go unchecked in the future as in the past. Although it is clear that the labor difficulty is likely to achieve a prominence which will almost strangle an important industry, it is imperative that the European nations who are developing Africa should act in strict accordance with Western ideals of civilization.

I DON'T know what is the general practice in America, but over here the thermometer is preferred to the pressure gage as being much more reliable in its indications. An English firm which has long made a specialty of thermometers for rubber factories is Messrs. Joseph Casortelli & Son, of 43, Market street,

THE
LONDON
CYCLE
SHOWS.

INDIA-RUBBER
AND HUMANITY.

THERMOMETERS
FOR VULCANIZING.

Manchester, and they now make a point of engraving on the brass of the thermometer the steam pressures corresponding to the temperatures. This firm carry out the thermometer manufacture in all its stages themselves, while as regards London makers it is the usual practice to subdivide the work, the glass blowing being done by firms who make this a specialty; but who do not carry their work any further, selling it at this stage to the optical instrument makers. I presume that as far as vulcanizing thermometers are concerned, America fills her own needs, though I know that large numbers of clinical thermometers are exported yearly from the neighborhood of Hatton Garden to America. In Great Britain the Fahrenheit scale is almost universally used, the only notable exception of which I am aware being the Dunlop Rubber Co., who use a thermometer of the ordinary laboratory type, all glass and graduated to the Centigrade scale. This type of instrument, I should imagine, is very apt to suffer at the hands of workmen.

THE demand for solid cab tires is decidedly on the increase and it is noticeable that one or two firms who own patents but have hitherto given the orders for manufacture to rubber works have of late put down rubber plant of their own, in order to get the manufacturer's profit for themselves. It is to be hoped that those who are following this course will find their way easy, but it is a fact that the manufacture of such tires successfully postulates an intimate knowledge of detail and the successful way in which our large rubber works are carrying on the business has not been achieved in a moment but only after a considerable expenditure of time and money. I don't wish to write in a pessimistic strain; but at the same time it seems desirable to draw particular attention to the existence of sunken rocks which those who already see the manufacturers' profit in their grasp are only too liable to ignore the existence of. It is pretty well recognized that in order to gain and retain public confidence it is advisable to stick to a good quality of rubber, and we are not likely to see the mixings degenerate into the sort of thing that one has become accustomed to in the case of perambulator tires.

MESSRS. BROADHURST & CO., about the crisis in whose business reference has recently been made in these columns, have now been reorganized as a limited company with a capital of £10,000. The various objects for which a company is floated are often exaggerated in the memorandum of association, but it is noticeable that reference is not only made to rubber and leather business generally in the present case, but also to the electric cable manufacture. Some comment has been caused by the comparatively small capital, but however this may serve for the purposes of the mechanical rubber business it is difficult to see how it is in any way adequate for the needs of the cable manufacture. The first directors of the new company are Messrs. Robert Hindle, Thomas C. Middleton, and John B. McKerrow. The business will be carried on in the old premises in Bradford, Manchester. —I understand that proceedings are being taken by E. G. Wood, of the patent Self-Gripping Fabric Tire, against the "Radax" tire of Manchester, and The Swain Tyre Co., of Harwich, for alleged infringement. —The Eccles Rubber Co. have emerged, Phoenix-like, from the ashes of their conflagration, and are now making and selling balls again as hard as ever. Mr. Bruneseaux, late of the rubber shoe department at Frankenburg's, is now with the Eccles company. —I understand that the North British Rubber Co.'s motor tires have now been raised to the same price as those sold by the Dunlop company, and, if speculation is permissible on the subject, this may be due to either of two causes: firstly, an amicable arrangement between the two companies as to selling price, or, as has

been suggested by a motorist of some experience, in order to let the business slide, the difficulties in connection with it being more acute than was at first anticipated.

I DON'T know whether it has made any appreciable difference in the ladies' mackintosh business or not, but the popular garment at the present time is of rain-proof material sold at from 25 to 30 shillings, with the undertaking that it can be returned for a new rain-proof dressing when it shows a loss of its useful effect. I understand that these goods are of French origin; certainly they have a good appearance, and the undertaking to reproof them, so to speak, has proved an attractive bait. It remains yet, however, to be seen how far this undertaking is carried out in the letter and, further, what its effect is.

A CHEMICAL manufacturer unburdened his soul to me the other day with regard to a difficulty which I understand is of common occurrence with hose. It is not that the rubber is bad, or is acted upon by the chemicals; it is a physical injury accruing from the method of use. Rubber hose is very generally used to siphon liquors from one tank to another, for which purpose the coil is put into the first tank so that it may be filled and ready to act as a siphon when it is hung over the side of the tank. It is this part of the process which causes the trouble as the rubber gets eroded and soon wears away. A remedy which at once suggests itself is to cover the tube with hemp or some other textile material, but the chemical people object to introducing this into their liquors. Under the circumstances it is not easy to see a way out of the difficulty, but I make it public as there are probably fertile brains which may suggest a remedy.

PATENTS in connection with tires or other details of bicycles continue to be taken out by inventors, but when it comes to selling them to the public in the form of companies or syndicates, there is a growing diffidence exhibited by investors. And the objection always made is that the Dunlop company is sure to go for it on some ground or other, thus involving the new company in litigation and expense at the outset of its career, and this acts as a potent deterrent in cases where there is not too much money, even if a strong feeling exists that the threatened opposition of the big company has no sort of justification.

QUITE a degree of excitement has been created in golfing circles about this ball, which has come from America with such a great reputation. Newspapers both general and technical have had articles on the subject, but it is rather too soon to say whether the interest that has been aroused will result in the permanent use of the ball. Certainly the retail selling price of 2s. 9d. will undoubtedly prove a drawback, as the game is not by any means confined so much to the well-to-do as was the case some years ago. I shall prefer to withhold the scattered observations which I have made concerning this ball until I have sifted them and gaged their credibility.

NAPHTHA IN RUBBER WORK.—"People not familiar with the rubber trade have no idea of the great quantity of naphtha that is consumed in Akron," said a rubber manufacturer of that city, quoted in the *Daily Democrat*. "I would not attempt to estimate the quantity, but it runs into hundreds of barrels every week and there is considerable competition between the Standard Oil Co. and the Cleveland Refining Co. for the supplying of this demand. Maybe when the rubber manufacturers all unite to import their own crude rubber they will combine to purchase their naphtha jointly and secure better prices."

WATERPROOF GARMENTS.

CHEMICAL TUBING.

TIRE PATENTS.

HASKELL RUBBER GOLF BALL.

CAB TIRES.

COMPANY NEWS.

A GERMAN OPINION OF THE RUBBER SHOE MACHINE.

From the "Gummi-Zeitung" (Dresden).

UNDER the heading "A Revolution in the Manufacture of Rubber Footwear," THE INDIA RUBBER WORLD, of New York, presents an alarming article on a newly invented machine for the manufacture of rubber shoes, excluding all hand work. Generally we view these alarm articles written on the other side of the ocean from a skeptical standpoint, and if the article cited above did not emanate from our otherwise well informed—and in matters pertaining to the rubber industry well versed—American cousin, we would have scarcely taken any notice of it. Our American cousins are incorrigible optimists, and even if, through this tendency, they have sometimes made rapid advances and flitted over harrowing obstacles, which others had with difficulty to climb, fatal disappointments have occurred to them oftener than to any other nation, and untold capital has been lost by them in unlucky inventions and revolutionizing improvements, which afterwards proved premature and impracticable. With us events move more slowly, and, therefore, more surely and thoroughly; in consequence of which, we are constrained to accept this story of the manufacture of rubber shoes entirely by machinery, with prudence. But let us first hear what THE INDIA RUBBER WORLD has to say. [Here follows the article published November 1, 1901—page 51.]

This much for THE INDIA RUBBER WORLD. The difficulty, in the face of this enthusiastic description of this wonder working machine, to maintain the cool deliberation of those interested, is at once apparent. But within this fabulous description lies the very point which awakens distrust. Until now the American gentlemen have praised their rubber shoes as being the very acme of elegance and beauty, unsurpassable in quality; they described their factory methods of thoroughness, practical exploitation of space and labor, etc., as unattainable by others—no necessity existing for improvement. To day they rudely term their shoes "uncouth abortions," and their method of manufacture "clumsy, of the middle ages"; this, of course, for no other reason than to "boom" the new machine to the extreme.

As far as we are concerned, we can but remark that the now existing condition of our rubber shoe manufacture is to us entirely satisfactory, having no occasion to denounce it as crude and ancient. The German shoe is handsome, light, and cheap, and exceptionally durable. The German methods of manufacture, as, for instance, we witnessed them in Harburg, have attained the same high standing which characterizes all other branches of our German industry. Machine work, wherever possible, has superseded handwork, and this, where actually necessary, has been organized to precision, and so trained as to obtain the highest possible results. It is certainly possible that further improvements and inventions can be made, whereby the high cost of production may be lessened—our manufacturers not objecting while the quality of their product is not deteriorated, but in this, as well as in all other things, the advances are made carefully, step by step, systematically improving one after the other. A wonder machine producing in one minute a complete rubber shoe of superior quality to any heretofore had, and that by using inferior material, and at a lower cost, must arouse the suspicion of every rubber man who is at all familiar with the many sided perplexing details, and exacting demands made of the rubber shoe. It must also

be considered that with us, in Germany, where labor is not so costly as in America, the saving derived from machine work does not figure in the same ratio as there. It is our belief, therefore, even if everything should transpire, as told in the above description, the "revolution" in the manufacture of rubber shoes will progress but slowly in Germany.

We do not maintain, however, that it is impossible to manufacture a complete shoe entirely by machinery; human skill and ingenuity have solved more difficult problems than that, and why should it not succeed in this? It may also be possible that a shoe thus manufactured may present a more pleasing appearance, and be cheaper, but in one essential it is bound to be inferior to the now existing product, and materially so—*i. e.*, durability, a feature which especially distinguishes our German shoes. Machine work has succeeded in many instances, producing handsome articles of pleasing appearances with the greatest of ease where handwork would be laborious and difficult, but, simultaneously, with the machine work appears its inseparable companion—less durability. This is within the order of all things and will be so in this instance; in fact, from the few remarks made by THE INDIA RUBBER WORLD, in regard to the manner of manufacture, it may be taken for granted. Apparently the rubber is sprayed into a form, or, in a softened condition, is pressed over a model. Every rubber manufacturer is aware of the fact that sprayed rubber, or rubber which has to be softened beforehand, becomes less durable. It is, furthermore, plainly to be seen that the shoes have to undergo cold vulcanization, and it is equally well known that goods vulcanized by that process are less durable than those which undergo heat vulcanization. Added to these defects is the fact that cheap mixtures are used, which give, with mathematical precision, a corresponding cheapness in quality and durability.

Now, as to the details. In handwork the materials are selected according to the amount of wear imposed upon each particular part; strong reinforcements are made where needed; the uppers are to be elastic and should not tear; the counters must be stiff, and not break; soles and heels should be elastic and tough. For all these a different grade of rubber and material is used. These painful details are the factors producing durability; they are unattainable by machine work. Therefore, the rubber shoe, made by hand, as it now exists, will no doubt remain supreme in solidity and durability, not to be crowded out by machine made shoes. If we were made to believe everything as described by our worthy contemporary on the other side of the ocean, on this point we could never be brought to agree. Similar stories have been told about the manufacture of rubber balls, and pneumatic tires, from which several years ago much was expected, and which were also termed a "revolution" in their manufacture. Well, time has proved that it is impossible for machine work to compete with carefully planned hand work, where everything is considered. The skill of human hands in many instances is as indispensable as the detailing and parceling in manufacturing, made possible by it, which is not within the scope of a machine, and, if we are not far wrong, this pertains especially to the manufacture of rubber shoes.

A noticeable point is that it is claimed for the described machine to have been patented in "America and foreign coun-

tries," but as yet no patent has been obtained in Germany for it. This is of great import because, generally, the granting of a German patent is regarded as a test for the newness and practicability of an invention. Close researches reveal the fact that within the past five years no patent has been granted Joseph O. Stokes for the manufacture of rubber shoes in Germany. We will await further developments in this matter, which is important enough to have special attention given it.

THE RUBBER SHOE TRADE IN GERMANY.

[FROM THE "GUMMI-ZEITUNG," DRESDEN.]

WITH the advent of the rainy cold season, the busy time in the rubber shoe branch begins, and, though but few rainy days have been recorded during this fall, a brisk demand for rubber footwear has already set in in the large cities. The prospects are very favorable for this season. The long continued cold weather and the heavy snows of last winter, not only caused a general cleaning out of stocks of the retailers, but caused the shoes to be worn out in consequence of their long continued use, so that new ones will have to be bought.

The use of rubber shoes is growing continually, as the public by degrees becomes more and more convinced of the benefits derived from wearing them during cold and wet weather. It is to be regretted that this increasing consumption of rubber footwear does not redound solely to the benefit of our home industry, which is fully competent to supply the demand. It is to be hoped that this increasing consumption will not receive a check from the introduction of inferior qualities. The public seems inclined to favor the thin, light shoes (which are praised as the best by the foreigners), without taking into consideration that with our generally coarse footwear and hard paved streets, goods of that style cannot possess much lasting quality. Lightness and thinness are obtained at the expense of durability, and, as the great majority of consumers prefer a durable rather than a stylish or ultra fashionable shoe, it is timely to call the attention of buyers to this fact.

Experience has conclusively demonstrated that in countries lying more northerly, where severe winters are of long duration, a strongly made shoe with heavy sole is the only one practicable, and capable of withstanding the climatic conditions. Of course it is possible to combine fit and appearance with wearing qualities, but this, as before mentioned, must not be done at the expense of the latter. Attention may here be called to the habit of the dealers to sell, generally, shoes which are too narrow, hastening their premature ruin. A rubber shoe should neither bulge nor stretch, but be of such dimensions that it can be easily drawn on or removed. Tight overshoes will soon show a split of the outer rubber at the edges of the soles, or a rubbing through of the inner insertions. But with all this the rubber shoe should not be so loose as to flop at the heels; it should be a good and easy fit.

Speaking in general, the trade in rubber shoes in middle Europe has not nearly reached its possibilities, the general public regarding it more as a luxury than an indispensable necessity for wear through all seasons of the year; their hygienic value being too little known to be fully appreciated. This matter should be attended to by all dealers and manufacturers, so as to convince the public that it is an absolute necessity, during cold and wet weather, for the rubber shoe to be on every foot; and by this means the sales may be doubled. It is so in other countries, and should be so in ours. The attention of the public should be continually called to the comforts and advantages derived from the wear of rubber shoes, through newspaper articles, advertisements, in the show windows, catalogues, etc.

THE AMERICAN PACIFIC CABLE.

PRESIDENT ROOSEVELT, in his first message to the United States congress, makes the following recommendation:

"I call your attention most earnestly to the crying need of a cable to Hawaii and the Philippines, to be continued from the Philippines to points in Asia. We should not defer a day longer than necessary the construction of such a cable. It is demanded not merely for commercial but for political and military considerations. Either the congress should immediately provide for the construction of a government cable, or else an arrangement should be made by which like advantages to those accruing from a government cable may be secured to the government by contract with a private cable company."

* * *

J. W. MARSH, of the Standard Underground Cable Co. (Pittsburgh) writes to the *Electrical World*, apropos of the statement that the Commercial Pacific Cable Co. had awarded a contract for the California-Hawaii cable to the Silvertown company because no American works was prepared to construct it, that only one reason has prevented an American deep sea cable industry from coming into existence. He says:

"Just as soon as congress cures the serious and apparent defect of the existing tariff laws, by an amendment imposing on foreign made submarine cables, such a duty as shall equal the 'theoretical' protection of the Dingley bill [applicable only to one marine league from shore], applied to the entire length of a cable, the manufacture of deep sea cables will become an American industry of no mean magnitude."

* * *

IN view of the announcement of Signor Guglielmo Marconi that, on December 14, he received at St. John's, Newfoundland, wireless telegraphic signals from Cornwall, England—a distance of nearly 2000 miles across the Atlantic—the *New York Herald* procured an interview with George G. Ward, vice president of the Commercial Pacific Cable Co., as to the probable effect upon ocean cabling of the success of Marconi's experiment. Mr. Ward said:

"I would not, for a moment, deprecate anything that Marconi has done, but I see no cause as yet for cable men to become alarmed. Ocean cabling is a delicate operation, even with the best of conductors, and Marconi proposes to turn his currents loose in the air without a conductor. Nearly nine-tenths of our business is in cipher, and accuracy is of the greatest importance. An error of one letter may give a contrary meaning to an entire message."

"Will Marconi's experiments have any effect upon the laying of the cable to the Philippines?" was asked.

"Not the slightest," replied Mr. Ward. "We have already contracted for the work and 100 miles of the cable have been completed by the manufacturers. Marconi, if he has talked between Newfoundland and Ireland, has covered about 1600 miles. Our cable to the Philippines will be 7000 miles long. Even if Marconi could send messages 1600 or 1800 miles, it would not do us any good in reaching the Philippines, as we have no way stations within that distance."

* * *

JOHN W. MACKAY, president of the Commercial Pacific Cable Co., said recently to a newspaper man at Los Angeles, that San Francisco has been chosen for the Pacific cable terminal.—The Seattle (Washington) chamber of commerce has adopted a memorial to congress favoring an American cable from Puget Sound to Alaska, the Philippines, and Asia—or by what is known as the "northern route."

THE RUBBER PLANTING INTEREST.

WHAT IS MEXICAN RUBBER WORTH?

SINCE the interest in rubber culture in Mexico has become so widespread, THE INDIA RUBBER WORLD has been in constant receipt of inquiries from outside the trade regarding the value of rubber produced in that country. It is becoming better understood that the rubber from different countries differs in quality, and the fact that fine Pará rubber at times brings \$1 a pound, does not indicate an equally high value for the Mexican product. The amount exported from Mexico—practically all of which, as yet, is wild rubber—is too small, relatively, and the shipments too irregular, to admit of established market quotations, as in the case of the rubbers which are constantly in stock in large amounts. Mexican rubbers are classed as "Centrals," along with the product of the Central American states, Colombia, and Ecuador. Hence their market value may always be judged by the quotations for Centrals. In answer to an inquiry, the leading crude rubber firms in New York city have favored THE INDIA RUBBER WORLD with statements regarding Mexican rubber, which are presented herewith:

I.

The imports of Mexican rubber are very small at present. *Mexican Scrap* classes with *Esmeralda* and good *Central Scrap*. *Mexican Sheet* classes with the better goods of *Central American Sheet*. This is a fairly good rubber and is liked here about the same as the other good Central grades. We quote to-day: 53 @ 54 cents for good *Mexican Scrap*, 48 @ 50 cents for good *Sheet*, and 45 @ 46 for tarry *Guatemala*.

II.

Mexican rubber comes largely in what is known as *Scrap* and *Strip*, mixed in the same bale. This rubber is worth to-day 54 @ 55 cents and, as it usually comes, is practically the same value as *Nicaragua Scrap*, the rubber being somewhat dryer than *Nicaragua*, and the shrinkage somewhat lower, but on account of the *Strip* being mixed in the bales, it usually brings the same price. The rubber is clean and dry, and is a good, hard, strong rubber.

III.

All *Mexican Scraps*—such as *Tuxpan*, *Laguna*, and *Vera Cruz*—follow our prime scraps, *Esmeralda* and *Nicaragua*. They seldom fail to sell under one cent below. The qualities of *Mexican Scrap* are most desirable, being of low shrinkage, and desirable for shoe manufacturers, who are the chief buyers. To-day's values, 54 @ 54½ cents.

IV.

Many Central American rubbers sell at this market as Mexican, such as *Salvador Sheet*, *Guatemala Sheet*, *Tarry Guatemala*, *Tuxpan Strip*, etc. All these Mexican rubbers are classed with Centrals, such as *Nicaragua Scrap*. The prices vary according to the grades and qualities. Good *Mexican Scrap* brings the same as *Nicaragua Scrap*, but occasionally higher. *Salvador* and *Guatemala Sheets* sell from 5 to 15 cents per pound less, according to the quality. We can quote to-day *Mexican Scrap* 54 @ 55 cents.

V.

Mexican rubber has always come here, and the *Scrap* to-day is worth 55 cents. The *Sheet* and *Strip*, according to quality, bring from 53 down to 45 cents.

It is interesting to note that these several letters, from as many different houses, are in substantial agreement as to the rank and the current values of Mexican rubbers. By the way, the quotation on the same date for the highest grade of *Pará* rubber was 88 cents.

From one of the letters quoted it is to be inferred that if Mexican rubbers were graded more closely, the prime sorts would bring more money. It is, indeed, commonly recognized that all Centrals are capable of more cleanly preparation than at present, in which case their selling value would be enhanced. But it is out of the question, by any means, to make rubber from the *Castilloa elastica* tree of Mexico and Central America equal in its properties, for manufacturing purposes, to the product of the rubber trees of the Amazon valley.

MEXICAN MUTUAL PLANTERS' CO.'S SHORT CROPS.

[Plantation "La Junta," state of Vera Cruz. Offices: New York Life building, Chicago.]

THIS company's November bulletin states: "Until this year, we have not attempted to raise side crops—not even for our own use; but with the big force we have maintained on the place this season, we have planted and are now harvesting over 200 acres of corn, and are planting a second crop of 200 acres; also, 50 acres of beans. As these plantings are made in our new rubber fields, which must be kept clean, the expense of cultivation amounts, practically, to the planting and harvesting of the crops, and with the demand that is likely to exist, we anticipate a good sized revenue for our investors, from this source."—The price of corn in Mexico has been very high of late, and yet it is practically a necessity on every plantation. There have been reports of \$100 Mexican paid per ton, or in the neighborhood of \$1.40 gold per bushel, and the government has been petitioned to remove the import duty.—There were recently 81 Chinese employed on "La Junta" plantation, and 20 expected. Toy Kee, lately of San Francisco, "an Americanized Chinaman of ability," has been engaged as superintendent of Chinese labor.

THE OBISPO RUBBER PLANTATION CO.

[Plantation "La Republica," state of Oaxaca, Mexico. Offices: Park Row building, New York.]

MR. MAXWELL RIDDLE lately returned from this plantation to New York, and reports that the year's progress on both the company's lands and his private estate has strengthened his confidence in the future of rubber culture. The first planting of rubber (*Castilloa elastica*) was done on the Obispo property during the year, two methods being tried: (1) planting the seed at stake in the location to be occupied permanently, and (2) transplanting seedlings from a nursery. The first method Mr. Riddle regards as preferable, where it can be practised, for the reason that, under the most favorable condition the transplanting of seedlings gives a setback to their growth. Where planting at stake is the method adopted, three seeds are planted at each location selected for a tree, and when the plants appear the superfluous ones are pulled up, leaving the most vigorous specimens, of course. Thus is obtained a stand of selected plants, the growth of which is uninterrupted by any shock such as might result from transplanting. But this method is practicable only during the brief period—usually in June—while the seeds of *Castilloa elastica* are ripening, since they do not long retain their vitality. On the other hand, if the seeds are sown in nursery beds, the seedlings can be transplanted during at least eight months of the year, and at any age from a few weeks to eighteen months or more. As a rule planters find it more convenient to continue the work of planting through the year than to concentrate it within a single month, and hence the resort to seeding

in nurseries as a feature of the work. March, April, and May constitute what is called the "dry season," during which transplanting is out of the question. Mr. Riddle reports a loss of only 1 per cent. of the seedlings transplanted since June last, which is an exceptional record. The result from planting seeds at stake was less satisfactory, owing to the location being on a hillside, so that some of the seed planted was washed out by heavy rainfalls. Four hundred trees are planted to the acre, 200 of which will be removed at the age of say five years, and all the available rubber taken from stem, root, and branch; besides, there will be more room for the remaining trees. This estate is the one referred to already in THE INDIA RUBBER WORLD as being developed under contract by the Republic Development Co. In addition to this, Mr. Riddle is engaging in rubber cultivation on his private account. He has done some planting in each of three seasons past, and now has a considerable number of trees dating from the seed crop of June, 1899.

THE VERA CRUZ DEVELOPMENT CO.

["La Rameralda" Plantation, state of Vera Cruz, Mexico. Office: Canton, Ohio.]

THIS company, composed of leading business men of Canton, Ohio, have acquired 3000 acres of land near the Vera Cruz and Pacific railway. It is also on the Tesechoacan river, which is navigable, a regular line of steamers running direct to the Gulf of Mexico by way of Avarado. It is intended to plant half the estate in rubber, and the remainder in sugar cane and "short crops." The company offer for sale plantation shares, entitling purchasers to participate in the profits of the enterprise. The plantation manager will be Professor L. M. Bloomfield, some time connected with the Ohio State University and more recently interested in tropical agriculture, particularly in Honduras. The Vera Cruz company were incorporated under Arizona laws, in July, 1901, with \$1,000,000 capital.

COLINA PLANTATION CO.

[Plantation in the state of Oaxaca, Mexico. Office: Independence, Iowa.]

INCORPORATED October 7, 1901, under Iowa laws. The company own a small plantation of the "Dos Rios" group, which was purchased five years ago by the gentlemen who are now officers of the company. They have now 22,500 coffee trees, mostly five years old, and 4000 rubber trees of the same age. They purpose planting 50 acres in rubber this year. The directors are: Vernon W. Peck, Pittsburgh, Pa.; A. C. Smith, Storm Lake, Iowa; Owen E. Cole and Clark L. Cole, Independence, Iowa; and George Montgomery, Alexandria, South Dakota.

ILLINOIS RUBBER CO.

A COMPANY under the above name is being organized at Bloomington, Illinois, to cultivate rubber in Mexico, on plans suggested by John S. Spencer, a former resident of Bloomington, but who for several years has been engaged in growing coffee at Manitlan, on the isthmus of Tehuantepec.

STRAITS SETTLEMENTS.

THE annual colonial report for 1900 says: "Rubber cultivation is steadily increasing. - - - Rubber is attracting the attention of Chinese estate owners, and is being largely planted on the Bukit Asahan estate, owned by a Chinese syndicate, and at Durian Tunggal. Both Pará rubber (*Hevea Brasiliensis*) and India rubber (*Ficus elastica*) thrive in the Settlement, and the cultivation is only limited by the difficulty in obtaining seeds and cuttings. The government plantations of both these trees should in a few years be capable of supplying all demands. - - - During the year plantations of Gutta-percha producing trees were started in Singapore and Malacca. The supply of young plants and seeds is limited, and it is difficult

to obtain any large number at a time. Five hundred young Gutta-taban (*Dichopsis gutta*) trees were, however, obtained from Penang and planted in Malacca. Most of these are doing well."

CEYLON PLANTERS' RUBBER SYNDICATE, LIMITED.

AT the first general meeting of shareholders, at Colombo, October 31, accounts were submitted to the end of August. The syndicate's property embraces 884 acres, on 615 acres of which the timber had been felled, on 480 acres further preparatory work had been done, and 300 acres planted in rubber. The manager expected to have 350 to 370 acres planted by September 30, and the remainder by the end of the year, the plants not being large enough to be set out earlier. Most of the land is given out to Chinese to weed, in return for being allowed to plant vegetables among the rubber. These details are gleaned from *Planting Opinion* of Madras, India, for November 9.

PLANTING ENTERPRISE IN SELANGOR.

THE Kajang Coffee and Rubber Co., Limited, have been registered in London, with £23,000 capital, to acquire three estates in Selangor, in the Malay peninsula, namely: The West County estate, managed hitherto by Allen & Co.; the Belmont estate, and the Weld's Hill estate. The business of the new company will include growing and dealing in coffee, tea, India-rubber, and fruit, and prospecting for minerals. The first directors are: C. W. Prosser, A. A. Allen, E. Field, and F. H. Hicks.

RUBBER SEED AND PLANT CATALOGUE.

THE "Descriptive Price List of Tropical Seeds and Plants and Commercial Products" issued by J. P. William & Brothers (Heneratgoda, Ceylon), for 1901-02, like its predecessors, devotes no little attention to India-rubber yielding species. Over thirty varieties of rubber and Gutta-percha, seeds or plants of which this firm are prepared to supply, are described in their pamphlet, and prices given. There are some additions to the list this year, one of which is referred to as follows:

Euphorbia Tirucalli.

("Almeidina" Gum, or "Potato" Rubber.)

We understand from THE INDIA RUBBER WORLD that this gum was first brought to notice about 1881 by Senhor Almeida. The export in 1898 was valued £776 18s. 5d., and in 1899 more than double the value, and early increasing. The plants do not bear seeds, but are propagated by cuttings. - Warden cases of 200 plants £10. Grow from the sea level up to 2000 feet and over.

An interesting feature of this catalogue is the information which, incidentally, it gives in regard to rubber planting undertakings in various countries. For example, "a leading rubber planter in Sumatra" is reported to have purchased 50,000 Pará rubber seeds in 1899 and 100,000 seeds in 1900, and to have been satisfied with the result. The shipment is mentioned of 2500 Pará rubber plants to British New Guinea, Ceará rubber seeds to Colombia (South America) and to Lagos (West Africa), and so on.

RUBBER PLANTING COMPANY PUBLICATIONS.

THE Vera Cruz Development Co., Canton, Ohio=La Esmeralda Plantation [Prospectus]. 32 pp. + map.

Mexican Mutual Planters' Co., Chicago=The La Junta Planter, No. 7. (November, 1901.) 24 pp.

Chicago-Chiapas Rubber Plantation Co., Chicago [Branch of the Chiapas Plantation and Investment Co., San Francisco.] =The Tropics Paying Tribute. 16 pp.

The Oaxaca Association (Inc.), Chicago=(1) Brief Facts and Answers to an Investor's Questions. 24 pp. (2) Bulletin No. 44—March, 1900, 15 pp. (3) Bulletin No. 51—October, 1900. 11 pp. (4) Bulletin No. 54—February, 1901. 16 pp.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS OF AMERICAN RUBBER GOODS.

THE values of exports from the United States of goods classed as "manufactures of India-rubber" during the first ten months of 1901, compared with former years, are stated officially as follows:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
Jan.-June.....	\$300,095	\$200,267	\$920,334	\$1,420,706
July.....	51,554	91,089	153,488	296,131
August.....	47,268	102,951	129,264	279,483
September....	48,736	173,090	118,029	339,855
October.....	54,611	165,932	149,409	369,592
Total, 1901	\$502,264	\$733,329	\$1,470,164	\$2,705,767
Same, 1900	443,939	526,878	1,260,961	2,231,778
Same, 1899	(a) 306,105	238,815	1,253,388	1,253,388

(a) Included in "All Other" prior to July 1, 1899.
[Exports to Hawaii and Porto Rico not included.]

Exports of rubber footwear, in pairs, have been:

MONTHS*	1899.	1900.	1901.
January.....	36,669	46,869	129,454
February.....	19,160	42,540	56,288
March.....	17,111	42,881	47,795
April.....	14,711	24,662	32,683
May.....	31,744	76,347	47,534
June.....	61,012	93,143	72,503
July.....	49,216	100,307	248,082
August.....	100,497	221,021	260,707
September.....	65,073	137,844	471,276
October.....	65,630	229,196	432,687
Total, 10 months..	460,823	1,014,810	1,799,009
November.....	81,209	118,663	
December.....	79,037	265,812	
Total, 12 months.....	621,069	1,399,285	

Exports of reclaimed rubber, from January 1 to October 31:

	1899.	1900.	1901.
Value.....	\$381,176	\$448,698	\$302,695

CANADIAN IMPORTS OF RUBBER MANUFACTURES.

THE value of imports of manufactures of India-rubber and Gutta-percha into Canada during the fiscal year ended June 30 1901, as officially stated, shows an increase both in the imports from the United States and in the total:

IMPORTS.	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Boots and shoes...	\$ 70,341	\$ 519	\$ 106	\$ 70,966	\$ 17,583.75
Belting.....	37,250	165	....	37,415	9,352.68
Clothing and water-proof cloth....	52,219	117,754	27	170,000	46,289.77
Hose.....	53,792	1,038	224	55,054	18,953.81
Packing and mats.	40,481	938	204	41,623	14,156.93
Sheeting.....	264	156	....	420	92.00
All other.....	180,243	34,374	21,177	235,794	56,583.50
Total.....	\$434,590	\$154,944	\$21,738	\$611,272	\$163,012.44

Total, 1900.....	\$401,867	\$118,111	\$19,083	\$539,061	\$149,006.80
Total, 1899.....	359,037	110,523	15,130	484,690	134,717.69
Total, 1898.....	255,525	(a) 147,706	403,231	112,688.41	
Total, 1897.....	209,776	(a) 110,127	313,993	....
Total, 1896.....	217,536	(a) 139,745	357,281	....

(a) Included in "Other Countries."

There may also be noted the imports of the following articles, not classified by the Canadian customs as "rubber goods," but having a relation to the industry:

IMPORTS.	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Webbing, elastic and non elastic.....	\$82,773	\$53,309	\$2,618	\$138,700	\$24,529.07
Stockinettes, for rubber footwear.....	39,820	10,442	....	50,262	7,154.90
Duck, for rubber belting and hose.....	102,279	37	....	102,316	free.
Rubber thread, elastic.	2,109	....	....	2,109	free.

The exports of Canadian rubber manufactures were somewhat smaller than in the preceding year. The distribution was as follows:

To—	Value.	To—	Value.
Australasia.....	\$56,938	Chile.....	216
Great Britain.....	15,690	United States.....	57,772
Newfoundland.....	15,560		
Other British possessions.	1,788	Total.....	\$151,656
St. Pierre.....	410	Total, 1900.....	170,488
Germany.....	2,015	Total, 1899.....	133,332
Other Europe.....	1,167	Total, 1898.....	77,685
China.....	100	Total, 1897.....	26,121

Such exports to Australasia increased by \$29,373 and to the United States decreased by \$51,039.

The figures relating to imports of crude India-rubber published in THE INDIA RUBBER WORLD of October 1, 1901 [page 7] complete the statistics relating to rubber and rubber goods in the published official returns for the fiscal year ending June 30, 1901.

NEW AUSTRALIAN TARIFF.

The new tariff schedule of the Commonwealth of Australia which went into effect provisionally on October 12—being subject to modifications by the federal parliament—embraces the following *ad valorem* duties on India-rubber goods:

Rubber boots and shoes.....	25 per cent.
Cloths made waterproof with rubber.....	20 per cent.
Rubber and other hose, and manufactures not elsewhere included, in which rubber forms a part, including cycle and vehicle tires.....	15 per cent.

Imports exempt are Crude rubber, Rubber waste, Hard rubber in sheets, Rubber thread, and Elastics for boots and apparel.

The former tariff on tires was 10 per cent. *Bicycling World* (New York) prints a Melbourne letter stating that upon the announcement of the new rates, Dunlop tires went up \$1 a pair, but within three weeks were reduced by half a dollar, the company "sharing the increase with the agents." "The Dunlop concern, however, has not the monopoly that the parent house has acquired in the United Kingdom, and, although the goods are generally accepted as being the best, about a dozen smaller makers do a fairly prosperous trade."

RUBBER SHOE TRADE IN GERMANY.

THE German imperial statistical office gives the following details relative to the import and export of rubber boots and shoes for the first nine months of two years past—weights being given in kilograms and values in marks:

FROM—	1900.	1901.	TO—	1900.	1901.
Great Britain...	26,300	20,800	Belgium.....	10,400	8,900
Austria-Hungary...	30,800	19,500	France.....	15,800	7,400
Russia.....	391,200	425,300	Great Britain...	116,200	95,200
United States...	35,400	50,800	Holland.....	10,400	....
Other lands.....	12,200	17,800	Switzerland...	6,400	....
			Denmark.....	....	2,700
			Other lands...	53,900	35,500
Total.....	495,900	534,200	Total....	213,100	149,700
Value.. \$2,851,000	\$3,072,000		Value.. \$1,172,000	\$823,000	

Official Statistics of India-Rubber and Gutta-Percha.—United States.—Fiscal Year 1900-1901.

INDIA-RUBBER.

I.—Imports of Crude India-Rubber, by Countries.

FROM—	Pounds.	Value.
Europe:		
Belgium.....	5,151,828	\$ 3,311,776
France.....	379,469	220,246
Germany.....	1,673,294	794,534
Netherlands.....	224,819	115,391
Portugal.....	2,098,741	1,159,234
United Kingdom.....	7,461,673	4,241,959
Total.....	16,989,755	\$ 9,843,142
North America:		
British Honduras.....	46,927	27,017
Central America.....	1,267,615	873,126
Mexico.....	306,691	195,765
West Indies.....	45,578	17,757
Total.....	1,666,811	\$ 853,665
South America:		
Brazil.....	34,795,363	16,919,707
Colombia.....	453,174	204,293
Ecuador.....	733,088	335,764
Dutch Guiana.....	5,193	2,361
Peru.....	140	86
Uruguay.....	2,749	1,576
Venezuela.....	67,497	46,738
Total.....	36,067,124	\$17,510,535
Asia:		
British East Indies.....	561,751	247,993
Other Asia.....	86	48
Total.....	561,837	\$248,041
GRAND TOTAL.....	55,275,529	\$28,455,383
Total, 1899-1900.....	49,377,138	\$1,376,867
Total, 1898-99.....	51,063,066	\$1,707,620
Total, 1897-98.....	46,055,497	\$5,396,010
Total, 1896-97.....	35,574,449	\$7,457,976
Total, 1895-96.....	36,774,460	\$6,903,020
Total, 1894-95.....	38,741,607	\$8,353,121
Total, 1893-94.....	33,757,783	\$5,077,933
Total, 1892-93.....	41,547,680	\$7,409,234
Total, 1891-92.....	39,976,205	\$9,718,319
Total, 1890-91.....	33,712,089	\$7,856,280

II.—Imports of Crude India-Rubber by Customs Districts.

AT—	Pounds.	Value.
Boston.....	1,452,985	\$ 811,049
New York.....	53,211,715	27,310,112
Philadelphia.....	23,811	12,922
Mobile.....	11,450	6,002
New Orleans.....	269,108	283,597
San Francisco.....	66,227	31,998
Other ports.....	175	33
Total.....	55,275,529	\$28,455,383

III.—Exports of Crude India-Rubber, by Countries.

TO—	Pounds.	Value.
[Details are inaccessible as yet, but the major part has gone to Canada.]		
Total, 1900-01.....	3,305,905	\$2,302,109
Total, 1899-1900.....	3,751,698	\$2,760,046
Total, 1898-99.....	2,806,494	\$1,840,482
Total, 1897-98.....	2,717,418	\$1,462,973
Total, 1896-97.....	3,437,213	\$1,749,072
Total, 1895-96.....	2,891,072	\$1,418,941
Total, 1894-95.....	1,384,048	\$672,839

IV.—Imports of Manufactures of India-Rubber, by Customs Districts.

AT—	Value.
Baltimore.....	\$ 41,088
Boston.....	46,883
New York.....	317,114
Philadelphia.....	33,084

AT—	Value.
Hawaii.....	1,184
San Francisco.....	3,860
Chicago.....	22,583
Cincinnati.....	2,643
St. Louis.....	1,680
Springfield, Mass.....	1,794
Newport News.....	1,744
Other ports.....	4,680
Total.....	\$478,663

V.—Imports of Manufactures of India-Rubber, by Countries.

[+ Indicates increase; — indicates decrease.]

FROM—	Value.
Austria-Hungary.....	\$ 896—
Belgium.....	10,169+
France.....	121,217—
Germany.....	182,442—
Netherlands.....	11,823—
United Kingdom.....	150,097—
Other Europe.....	597—
British North America.....	831—
Mexico.....	19—
West Indies.....	2—
Asia.....	61—
Other countries.....	519—
Total, 1900-01.....	\$478,663
Total, 1899-1900.....	\$554,063
Total, 1898-99.....	379,309
Total, 1897-98.....	309,247
Total, 1896-97.....	297,953
Total, 1895-96.....	294,228
Total, 1894-95.....	315,902
Total, 1893-94.....	309,308
Total, 1892-93.....	338,435
Total, 1891-92.....	371,580
Total, 1890-91.....	354,645

VI.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Customs Districts.

FROM—	Belted, Packing, and Hose.	Boots and Shoes.	Other Rubber Goods.
Baltimore.....	\$ 50	\$ 50	\$ 25,653
Bangor.....	1,070	2,727	1,618
Boston and Charleston.....	14,955	261,111	285,146
New York.....	425,906	422,181	957,129
Pasamunquoddy.....	3,714	788	455
Philadelphia.....	463	17	1,364
Portland and Falmouth.....	.....	137	.....
Brazos de Santiago.....	.....	76	.....
Corpus Christi.....	.....	29,352	.....
Key West.....	56	35	35
Mobile.....	135	89	.....
New Orleans.....	3,471	149	805
Paso del Norte.....	1,539	.....	1,633
Saluria.....	13,142	.....	12,468
Alaska.....	6,394	5,343	1,375
Arizona.....	3,571	436	12,046
Hawaii.....	.....	15	15
Puget Sound.....	12,106	19,675	14,324
San Diego.....	441	16	254
San Francisco.....	40,494	5,949	75,461
Buffalo Creek.....	.....	.....	58,394
Cape Vincent.....	.....	.....	444
Champlain.....	3,342	483	47,342
Cuyahoga.....	.....	.....	392
Detroit.....	8,110	24	10,450
Huron.....	.....	.....	7,821
Memphremagog.....	8,168	942	14,455
Minnesota.....	.....	.....	2
Montana and Idaho.....	189	13	382
Niagara.....	.....	.....	79,935
North and South Dakota.....	5,012	16	6,254
Oswegatchie.....	1,810	13	7,758
Oswego.....	.....	.....	6
Superior.....	7	.....	3,533
Vermont.....	11,534	864	71,251
Total.....	\$565,726	\$724,015	\$1,737,527

GUTTA-PERCHA GOODS (in value) were imported:
 From United Kingdom, \$90,939; Germany, \$56,939;
 France, \$9975; Other countries, \$17; total, \$163,337.
 Total, 1899-1900, \$254,338. Total, 1898-99, \$115,588.
 Total, 1897-98, \$136,997. Total, 1896-97, \$97,194.

GUTTA-PERCHA.

I.—Imports of Crude Gutta-Percha, by Countries.

FROM—	Pounds.	Value.
Germany.....	125,274	\$59,557
United Kingdom.....	147,816	85,166
British East Indies.....	7,470	5,304
Total, 1900-01.....	280,560	\$130,957
Total, 1899-1900.....	427,678	\$178,616
Total, 1898-99.....	518,989	\$167,577
Total, 1897-98.....	636,477	\$169,381
Total, 1896-97.....	1,117,668	\$100,187
Total, 1895-96.....	3,843,854	\$178,513
Total, 1894-95.....	1,326,794	\$22,251
Total, 1893-94.....	496,763	\$4,340

NOTE.—The larger imports in former years included Balata, Pontianak, etc., which are now no longer classified as Gutta-percha. Of the total imports this year, 189,711 pounds arrived at New York and 82,854 pounds at Boston. Exports of crude gutta-percha were 595 pounds, valued at \$482.

RUBBER-SCRAP.

I.—Exports of Domestic "India-Rubber Scrap," or Reclaimed Rubber, by Countries.

TO—	Value, 1897-98.	Value, 1898-99.	Value, 1899-00.	Value, 1900-01.
Austria-Hungary.....	\$ 400	\$ 400	\$ 400	\$ 400
Belgium.....	300	300	300	300
France.....	28,682	9,606	2,276	7,923
Germany.....	22,970	30,706	56,263	48,269
Italy.....	8,179	6,800	16,119	10,204
Netherlands.....	184	463	2,923	2,734
Russia.....	.....	2,600	2,043	.....
Spain.....	.....	146	.....	.....
Sweden-Norway.....	411	8,325	6,149	8,302
Great Britain.....	98,788	110,747	125,902	180,382
Canada.....	95,083	168,568	259,416	200,422
Mexico.....	1,373	24,653	9,226	867
Japan.....	506	1,330	2,214	2,390
Other lands.....	314	128	60	442
Total.....	\$267,630	\$376,902	\$492,284	\$412,728

[Exports, 1896-97, \$119,440.]

NOTE.—This year some additional exports, from the port of New York, have been classed as "Reclaimed Rubber," the details of which follow, and should be embraced with the above.

TO—	Value.
France.....	\$ 53,747
Germany.....	159
Italy.....	7,400
Russia.....	575
Sweden and Norway.....	1,811
United Kingdom.....	165,127
Mexico.....	115
Japan.....	440
Total.....	\$229,365

II.—Exports of Reclaimed Rubber by Customs Districts.

[See note under preceding head, regarding additional shipments from New York.]

FROM—	Value.
Baltimore.....	\$ 1,209
Boston and Charleston.....	10,739
New York.....	112,601
Philadelphia.....	86,778
Champlain, N. Y.....	32,122
Detroit, Mich.....	1,528
Huron, Mich.....	17,851
Memphremagog.....	2,259
Niagara.....	20,708
Vermont.....	125,620
Other ports.....	1,276
Total.....	\$412,728

EXPORTS OF AMERICAN RUBBER GOODS.

FISCAL YEAR ENDED JUNE 30, 1901.

EXPORTED TO—	Belting, Packing, and Hose.	Boots and Shoes.		Other Goods Value.	Total Value.
		Pairs.	Value.		
EUROPE :					
Austria-Hungary	\$ 1,425		\$	\$ 12,330	\$ 13,756
Azores and Madeira		60	102	341	443
Belgium	3,699	34,736	13,833	61,895	79,427
Denmark	4,682	10,440	6,222	9,780	20,884
France	4,382	279,086	117,600	49,763	171,754
Germany	19,146	228,439	97,673	213,256	330,085
Gibraltar				224	224
Italy	2,038	412	197	67,451	69,812
Netherlands	1,055	150	104	38,720	39,879
Portugal				132	132
Roumania		1,728	1,021		1,021
Russia, Baltic	1,496			26,614	27,110
Russia, Black Sea				25	25
Spain	904	672	420	6,900	8,254
Sweden, Norway	7,889	435	276	23,266	33,431
Switzerland	1,097	1,580	657	46	2,880
Turkey in Europe		19,164	10,687	1,951	12,628
United Kingdom	86,245	662,881	291,389	559,248	938,882
Total, Europe	\$136,556	1,239,863	\$540,176	\$1,073,092	\$1,749,826
NORTH AMERICA :					
Bermuda	\$ 637	170	\$ 149	\$ 590	\$ 1,376
British Honduras	630			187	817
Nova Scotia, New Bruns.,	16,330	9,964	16,415	9,117	41,862
Quebec, Ontario, etc.,	35,555	3,296	2,234	303,289	341,048
British Columbia	22,712	9,462	23,029	20,680	68,421
Newfoundland, Labrador,	3,876	16,331	10,212	2,044	16,132
Costa Rica	3,591	15	47	2,998	6,636
Guatemala	2,018	30	24	4,561	6,603
Honduras	1,802	305	148	1,524	3,474
Nicaragua	1,787	24	9	1,204	3,000
Salvador	1,149	108	80	1,393	2,622
Mexico	113,614	5,344	2,526	91,786	207,936
Miquelon, Langley, etc.,	649	3,509	5,092		5,769
West Indies—British	5,707	262	214	1,951	7,872
Danish	92	872	236	298	626
Dutch	74			345	419
French	10			49	59
Haiti	993	72	58	529	1,580
Santo Domingo	1,962	182	116	778	2,856
Cuba	41,039	1,932	2,307	44,081	87,427
Total, North America	\$254,237	52,018	\$ 64,896	\$487,402	\$866,535
SOUTH AMERICA :					
Argentina	\$ 13,180	1,885	\$ 1,120	\$ 8,442	\$ 22,748
Bolivia				160	160
Brazil	3,905	1,911	1,786	7,059	12,750
Chile	7,217	2,294	1,601	5,542	14,360
Colombia	3,800	3,736	1,479	3,655	8,934
Ecuador	3,263	24	97	1,059	4,419
Guianas—British	374			302	676
Dutch	244	1	5	145	394
French				5	5
Peru	5,436	318	150	3,670	9,286
Uruguay	321	1,252	491	415	1,227
Venezuela	3,219	24	11	2,676	5,906
Total, South America	\$ 40,959	11,445	\$ 6,776	\$ 33,130	\$ 80,865
ASIA :					
China	\$ 2,212	1,634	\$ 2,115	\$ 5,059	\$ 9,386
East Indies—British	1,826			3,820	5,646
Dutch	346			169	515
Hong Kong	1,708	1,634	3,023	4,144	8,875
Japan	27,640	29,010	19,496	47,611	94,750
Russia, Asiatic	1,400	50	240	587	2,227
Turkey in Asia	94	630	328	99	491
Other Asia				343	343
Total, Asia	\$ 35,226	33,046	\$ 25,175	\$ 61,832	\$122,283
OCEANIA :					
British Australasia	\$ 71,026	120,919	\$ 84,607	\$ 44,004	\$199,637
French Oceania	485	116	274	1,023	1,782
Philippine Islands	5,111	672	948	11,310	17,869
Total, Oceania	\$ 76,622	121,707	\$ 85,829	\$ 56,337	\$218,788
AFRICA :					
British Africa	\$ 21,728	766	\$ 887	\$ 15,026	\$ 37,621
Canary Islands				82	82
Liberia		224	296		296
Portuguese Africa	330			249	579
Egypt	66			233	299
Other Africa				144	144
Total, Africa	\$ 22,124	969	\$ 1,163	\$ 15,734	\$ 39,021
Grand Total, 1901	\$466,726	1,450,100	\$724,015	\$1,727,527	\$3,017,268
Grand Total, 1900	\$541,830	767,104	\$420,746	\$1,405,212	\$2,367,788
Grand Total, 1899	(a)	496,586	290,896	1,504,499	1,768,385
Grand Total, 1898	(a)	391,832	224,705	1,499,157	1,723,692
Grand Total, 1897	(a)	306,026	195,499	1,611,646	1,807,145
Grand Total, 1896	(a)	350,713	216,657	1,642,499	1,856,156
Grand Total, 1895	(a)	383,793	225,986	1,279,156	1,505,142
Grand Total, 1894	(a)	261,657	155,011	1,306,831	1,461,842
Grand Total, 1893	(a)	420,950	252,391	1,367,013	1,609,404
Grand Total, 1892	(a)	231,105	185,570	1,232,497	1,418,067

[(a)—Belting, Packing, and Hose were included in the column of "Other Goods, Value," previous to the past fiscal year.]

NEW TRADE PUBLICATIONS.

PICHER LEAD CO. (Chicago) issue a brochure that doubtless will prove of interest in the India-rubber industry, on "Sublimed White Lead in Rubber Compounding," in connection with which compounds are given for the manufacture of various lines of rubber goods, each including the sublimed lead. [9"×6". 8 pages.]

BETZLER & WILSON (Akron, Ohio) have issued an illustrated catalogue for 1901-02, of their Fountain Pens, penholders, and hard rubber turned goods, which embraces a surprising variety of attractive styles in this line of goods. It is evident that there are fountain pens and fountain pens, in the matter of appearance, and doubtless also in the matter of merit. [7½"×5½". 28 pages.]

UNITED STATES RUBBER CO. issue a net price list of "Tennis, Yachting, and Gymnasium Shoes," for 1902, which shows no change from the corresponding list of last year.

THE SUPERIOR RUBBER TYPE CO. (Chicago), dealers in the various goods connected with the rubber stamp and rubber printing type trade. Their illustrated catalogue No. 6—"Superior Solid Rubber Type" [6½"×9". 64 pages]—contains samples of type faces in great variety. Their catalogue No. 9 [6¼"×9¼". 118 pages] is devoted to "Rubber Stamp Supplies," the number of which is much greater than might be supposed by one not familiar with this branch of business. These catalogues are accompanied by circulars of "Superior Sign Markers" and other specialties of the company named.

A NEW CATALOGUE FROM LEIPZIG.

THERE is no rubber goods catalogue published that is more comprehensive—in the branch to which it is devoted—or better arranged than the fifth edition of the "Haupt-Preis-Liste der LEIPZIGER GUMMI-WAAREN-FABRIK, AKT.-GES., vorm. Julius Marx, Heine & Co." (Leipzig, Germany), bearing date 1902. Some of the American rubber companies, by the employment of artistic printing and the introduction of inks of various colors, have given a certain degree of attractiveness to their catalogues which is lacking in this German list. But, after all, color printing is not essential to describing and illustrating and giving the prices of atomizers, syringes, hard rubber surgical specialties, tobacco pouches, elastic bands, and the like. The Leipzig list is, however, a good specimen of plain printing, with good ink, on good paper, and it forms a substantial volume of 396 pages, 7½"×10½" inches. The list of articles described embraces 7440 items and fills 230 pages, after which 149 pages are devoted to the illustrations, which appear apart from the text. The book contains also eleven full page halftone interior views, illustrating various departments of the factory. The last preceding edition of this list, dated 1895, contained only 218 pages, with 3060 items of production enumerated. A comparison of these figures with those given above will indicate a marked increase in the business of this company. The business was founded in 1864, and the first issue of their catalogue of surgical specialties was dated early in the seventies, since which time their trade has extended to every quarter of the globe.—The last yearly business report of the Leipsic company shows a good condition, with a dividend disbursed of 9 per cent. and a substantial surplus carried forward.

ALSO RECEIVED.

MORRIS & Co., Yardville, New Jersey=The Morris Spring Bottom Duck Baskets. 8 pp.

The Republic Rubber Co., Youngstown, Ohio=[Announcement of forthcoming catalogue.]

B. F. Sturtevant Co., Boston=Sturtevant Forges. 10 pp.

HEARD AND SEEN IN THE TRADE.

THE exhibit of one of the big rubber factories at the Pan American Exposition was in charge of a representative who has grown up with the company, so to speak, becoming familiar with rubber from many points of view, but he tells me that he was sorely taxed at times to answer questions put to him by visitors to the fair. Not only did they want information about the secrets of rubber manufacturing, but they thirsted for knowledge regarding the sources and nature and methods of obtaining the raw material. And a traveling salesman of several years' experience said the other day that he found it profitable to read everything available on the subject of rubber, in whatever connection, on account of what seemed to be a growing interest on the part of his customers and many other people in the raw and manufactured material. No doubt one cause of this deepened interest is the fact that practically everybody in the United States who can read has seen references lately to India rubber as a vegetable substance, capable of being produced by cultivation, and at a good profit in the right place.

ONE hears again, at the beginning of every winter, that the wearing of rubber shoes is likely to decline, on account of the growing use of thick soled leather shoes. Yet in proportion to the amount of snow in recent years, the production of rubber shoes undoubtedly has increased. The number of persons who affect heavy shoes as a fad is greatly outnumbered by those who buy rubbers, even as a necessary evil, in preference to risking their health in times of snow and slush. "I tell the wearers of heavy soled shoes," said a rubber shoe manufacturer, "that they only carry about with them more leather to absorb moisture than people who wear ordinary shoes."

AFTER the late Colonel Waring made such a reputation for keeping the New York streets clean, somebody—it may have been Robert D. Evans—told him that the profits of the United States Rubber Co. had fallen off \$100,000 a year on account of the lessened call for rubbers. But even under Colonel Waring the street cleaning did not extend to the suburbs which have been growing so rapidly about New York, and the same condition is true of our cities generally—creating a wider demand from the suburbs to offset any falling off in the city trade proper.

AN importer in New York, asked for an explanation of the decline in receipts of scrap rubber from Europe during the past year, gave two reasons. One was that stocks had been accumulating on the other side of the Atlantic in the hands of dealers who had bought in anticipation of higher prices than later prevailed in America. Their holdings are bound to come on the market, however, and dealers in New York are being pressed with offers of foreign supplies. The importer here quoted did not believe that the lessened imports of European scrap had been due either to reduced collections or to a measurably larger production of reclaimed rubber abroad.

THERE was one other important reason, however. Considerable rubber scrap had been imported, of a quality which did not prove satisfactory to the reclaimers, who have been careful since to specify that certain sorts will not again be accepted. For instance, the importer referred to spoke of solid rubber carriage tire scrap, of continental origin, as having proved most unsatisfactory. It will be remembered that imported rubber shoe scrap at first met with little favor in the United States, failing to give good results when subjected to the same treatment

as domestic shoe scrap. To-day imported shoes sell at \$20 a ton less than domestic stock, but this is due to the larger proportion of fiber contained in the scrap; the constituent rubber is reclaimed as thoroughly as in the case of any other scrap. But again to quote the importer, he was disposed to think that the dissatisfaction with imported tire scrap resulted less from the method of treating it than from the small percentage of rubber in the compounds.

REFERRING to the statistics of rubber scrap imports at New York contained in the last INDIA RUBBER WORLD, and showing a decline in 1901 as compared with the preceding year, *The Commercial Bulletin* (Boston) says: "It will be seen that importers got about an average of 6½ cents a pound for that stock, but it should also be borne in mind that they also got a tare of 3 per cent., whereas the domestic dealer gets no tare, having to send his stock 'standard packing,' so that the difference in price per pound between foreign and domestic rubber is less than 1 cent. In spite of this it looks as if the manufacturers and reclaimers had been buying foreign rubbers and letting domestics accumulate until they are forced onto the market. Two years ago there was a tare of 2 per cent on domestic rubbers."

No matter how much more Balata may be produced, there appears to be no increase in the consumption of this gum in the United States. This fact is the more noticeable in the view of the active part taken by Americans in exploiting Balata almost from the beginning. But Balata is affiliated more closely with Gutta-percha than with India-rubber, and as the use of Gutta-percha has never gained an important footing in the United States as compared with Europe, it is not surprising that the chief consumption of Balata should be found beyond the Atlantic. A New York merchant expresses the opinion that Balata might have come into more general use had it possessed a more distinctive character. It so resembles Gutta-percha, however, that in the main it is used for the same purposes as Gutta, the latter having the preference when "the price is right," and Balata coming toward the front only when Gutta is exceptionally high.

THE past year or two have seen an unusually large amount of submarine cable building, but without an advance in prices of Gutta-percha to the highest notch. Of course the laws of supply and demand apply to the Gutta-percha trade as elsewhere, but there are some secrets in the means whereby cable making firms obtain their supplies of Gutta-percha that, for the time being, are guarded as jealously as any of their secrets of manufacture. The story is told, that several years ago, when an important new ocean cable was being projected in England, rumors got out that a new rubber compound suited for deep sea insulation had been perfected. The compound was understood to be a secret in the possession of the company that secured the contract for building the cable, and everybody in the trade looked for a rise in rubber, due to the large quantity which the cable would require. Finally, when it became known certainly that Gutta-percha insulation was to be used, and people began to ask "Where are you going to get your Gutta-percha?" the answer was that the necessary supply had been secured quietly while the holders of India-rubber were waiting to sell out at an advance.

Some towns report a larger trade in rubber footwear already this winter than during the whole of last season, and it looks as if there is to be more snow.

DECISIONS IN TIRE PATENT CASES.

A SOLID TIRE DECISION.

A DECISION was handed down in the patent infringement case, *The Rubber Tire Wheel Co. v. The Goodyear Tire and Rubber Co.*, on November 23, by Judge Wing, in the United States circuit court for the northern district of Ohio, at Toledo. The complaint alleged infringement of United States patent No. 554,675, issued February 18, 1896, to Arthur W. Grant and by him assigned to the Rubber Tire Wheel Co. A supplemental bill was filed by the Consolidated Rubber Tire Co., the purpose of which was to show the relation of that corporation to The Rubber Tire Wheel Co., but the ownership of the patent was alleged to be still in the original complainant. This point, by the way, was disputed in the pleadings, but no serious contention was made on that issue at the hearing.

Judge Wing, in his decision, refers to the opinion of Judge Thomas, in the case of *The Rubber Tire Wheel Co. v. The Columbia Pneumatic Wagon Wheel Co.*, rendered December 27, 1898, in the United States circuit court for the southern district of New York, in which the validity of the Grant patent was sustained. Judge Wing proceeds to say:

In view of the able and elaborate opinion delivered by Judge Thomas, I do not deem it necessary to go into particularities with respect to the reasons for my conclusion. Suffice it to say that, upon an independent examination of the record, I have come to the conclusion, which, in brief, is this: That, while the elements of the complainants' combination are, each of them, old and well known, this particular combination of shape of rubber and of flange, and the position of the retaining wires, has not been shown in any previous patents or other publications.

The opinion proceeds to state that the infringement of the defendants is clear. While they urged in defense that they were operating under a patent issued to Burrows, the proof showed that the device described in the Burrows patent is not that which the defendants had been using in the manufacture of their "wing" tire.

Following this judgment, a permanent injunction was ordered to issue against any further infringement by the Goodyear Tire and Rubber Co., who thereupon presented an application for an appeal to the United States circuit court of appeals. The appeal was allowed, and the Goodyear company signed a *supersedeas* bond for \$100,000, under which they will be permitted to manufacture tires as before, while the case is pending in the court of appeals—this amount to cover all profits and damages that the complainants may prove themselves to be entitled to, in the event that the final decision should be in their favor. The Goodyear company have issued a circular to the trade, guaranteeing protection to their customers, and to THE INDIA RUBBER WORLD they say: "We have every confidence that the finding of the court of appeals will be in our favor upon the question of infringement. In the meantime our business is in no way affected."

THE KELLY TIRE WINS IN FRANCE.

ON November 22 in the third chamber of the Palais de Justice, in Paris, was decided the case of Boudin *v.* Rouy, the former representing The Rubber Tire Wheel Co. (Springfield, Ohio) and the latter a manufacturer, Loubière, of 62, rue Desrenaudes. The suit was one for damages for alleged infringement, by Loubière, of the Grant patent on solid rubber vehicle tires, which, in France, was issued April 10, 1896, under

No. 252,731, the same relating to what is known in America as the "Kelly-Springfield" tire. The decision was for the plaintiff. It had been set up by the defense that each of the parts and processes employed by The Rubber Tire Wheel Co. in the construction of their tire had become public property. Expert testimony, however, established the novelty of certain details, beside which the court held that a novel combination of known means is patentable, provided that the article produced by the combination is of industrial utility. On the other hand, certain claims of the patent were declared invalid, on account of publication in the United States in 1894. But on the whole the court holds the patent valid and to have been infringed by Loubière, who is condemned to pay a preliminary sum of 1000 francs damages, and such further sum as may be fixed by a board of experts, together with all costs. It is understood that an appeal will be made.

TILLINGHAST PATENT DECISION CONFIRMED.

THE United States circuit court of appeals for the first circuit (New England) on December 12 handed down a decision affirming the decree of Judge Colt—of date November 14, 1899—sustaining the Tillinghast patent on single tube pneumatic tires. The patent involved is No. 497,971, granted May 23, 1893, to Pardon W. Tillinghast. The claims in controversy, as they appear in the patent specification, are as follows:

1. A pneumatic tire, consisting of a rubber-air tube, and outer covering, substantially as specified, with the ends of the air tube and other component parts securely united by vulcanization, substantially as described, thereby constituting an integral complete tire.
2. A pneumatic tire composed of a rubber tube, an intermediate layer of fabric, and an outer covering of rubber, having all its rubber joints and component parts simultaneously vulcanized together, forming an integral annular tire.

The decision of Judge Colt, referred to above, was rendered in the case of *Theodore A. Dodge v. Fred Howard Porter, et al.*, and the case on appeal is styled *Fred Howard Porter et al., defendants, appellants, v. Single Tube Automobile and Bicycle Tire Co., complainant, appellee*—ownership of the Tillinghast patents having passed to the latter corporation. The case on appeal was heard before Judges Putnam, Aldrich, and Brown, whose opinion follows:

Per Curiam. It was not contended at the hearing either in the court below or before us, that the publication by Boothroyd, of December 3, 1890, anticipated the invention in litigation. Neither are we sufficiently advised whether the record is in condition to properly determine such a contention if made. We give no intimation of what our conclusion would be if, in those respects, the conditions were other than what they are.

We are of the opinion that Claim 2 fully and correctly represents the invention of the patent, and that Claim 1 is too broad to be valid.

With these reservations, after thorough investigation and careful consideration of the record, we concur in the conclusion of the circuit court, and with the line of reasoning by which the conclusion was reached.

The decree of the court below is modified so far as to adjudge Claim 1 invalid, and the case is remanded to that court with directions to proceed accordingly; and the appellee recovers the cost of appeal.

"It is needless to say that we are very much pleased with the recent decision," said a member of the Single Tube Automobile and Bicycle Tire Co. to THE INDIA RUBBER WORLD, "as the sustaining of Claim 2 of the Tillinghast patent No. 497,971 is a complete victory for this company, and all that could have been desired. We are unable to understand why the court felt

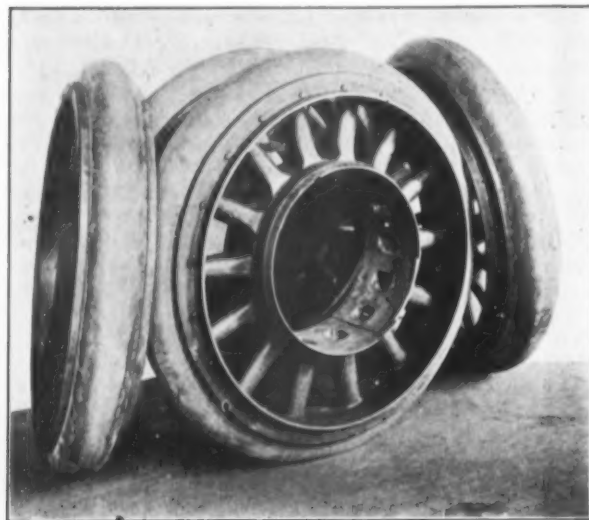
called upon to refer to the Boothroyd publication, as it did in its *Per Curiam*, as it is a matter that the appellants in their brief before Judge Colt admitted the priority of the Tillinghast invention to the Boothroyd publication by a few weeks."

NEW PROCESS FOR MAKING SOLID VEHICLE TIRES.

The Springfield (Ohio) *Democrat* in a recent issue devotes considerable space to a patent which has been granted to Mr. Albert T. Holt, superintendent of the Victor Rubber Co., of Springfield, for a new method of producing solid rubber tires for vehicles. It is stated that by this process the labor item of the production is reduced 80 per cent., and a great many more tires turned out per day than by any process heretofore used. It is understood that the patent, which has been allowed, embraces four claims, which were passed without any objection or suggestion of interference. Applications for patents in foreign countries are now pending.

TIRES FOR UNUSUALLY HEAVY WORK.

THE illustration represents a set of solid rubber tires made by the Calumet Tire Rubber Co. (Chicago) for the Hub Motor Transit Co., of the same city. These tires, weighing 125 pounds each, were designed originally to carry a maximum weight of 18,000 pounds. After the first specifications were given, however, the weight of the vehicle was increased, so that



the maximum weight is now 25,000 pounds. After running perhaps 1000 miles, the tires appear practically as good as new, showing almost no signs of wear, and affording reason for the belief that the same tires should continue to carry their unusually heavy load for another year or two. The tire referred to is the "Price Patent Flange Tire," designed especially for heavy vehicles.

RUBBER TIRES AND THE WHEEL TRADE.—Henry P. Jones, of Newark, New Jersey, in an address before the recent annual convention of the Carriage Builders' National Association, at Cincinnati, on the progress in "Wheels and Wheel Making," made the following reference to the effect of the introduction of rubber tires: "Candidly speaking, we think it has hurt the wheel trade 25 per cent.; that is the rubber tires lessened the call for wheels 25 per cent., owing to the increased life of the wheel, and it has also hurt the carriage maker, principally the smaller maker."

LATE "PACIFIC RUBBER CO." NEWS.

THE "Pacific Rubber Co." continues its philanthropic work of making its stockholders rich—at least on paper. They are the people who promise returns to investors at the rate of 360 per cent. in three years, based upon collections of 20 to 30 pounds of rubber yearly from their wild trees, to say nothing of profits later from cultivated rubber. Early in December the shareholders received a circular of which a copy follows:

UNITED SECURITIES COMPANY.

Capital and Surplus \$1,012,000.

66 Broadway and 17 New Street,

NEW YORK.

STOCKHOLDERS OF THE PACIFIC RUBBER CO.: As treasurer of the Pacific Rubber Co. I have arranged to sail for Mexico on December 11th, to make a careful personal inspection, and as the season for shipments of rubber and mahogany is at hand, wish to give special attention to arranging such shipments as will make it possible to increase our dividends.

I shall probably prepare my report for the end of the fiscal year while in Mexico, mailing same to each of the stockholders, and touching upon the present condition of the Pacific Rubber Co. and its future prospects, which are unquestionably sound and prosperous.

If any of the stockholders or prospective stockholders desire to communicate with me while in Mexico kindly have them address me in your care.

Very truly yours,

R. M. MINER.

Treas. Pacific Rubber Co.

The Boston *Traveler* of December 7 stated that R. M. Miner had been elected president of the Pacific Rubber Co. in place of "Mr. Surbrug," resigned. Mr. Surbrug is described in the Boston paper as "a director in many large corporations in New York," and he no longer has time to devote to the "growing needs" of the Pacific Rubber Co. The Boston paper says also: "Mr. R. M. Miner is well and favorably known both in Philadelphia and New York financial circles, and has long been identified with Wall street interests." The New York city directory contains this information:

Miner R M investments 35 Wall

A letter directed to this address recently by THE INDIA RUBBER WORLD came back indorsed: "Removed. No address. Cannot be found by N. Y. Postoffice." The Boston *Traveler* further reports that Pacific Rubber stock "will doubtless go to par, or \$10 per share, as soon as the extra dividend is definitely decided upon."

RUBBER STATIONERY FOR THE PUBLIC USE.

THE following items of rubber were included in the specifications for stationery for the use of courts and the departments and bureaus of the government of the city of New York, and of the counties comprised within the city limits, for the year 1902. Bids were opened at the office of the *City Record* on December 9, but no contracts were awarded.

FOR THE USE OF—		Erasers. Bands (Gross).	
City Departments.....	5920		6381
New York county ..	1106		1621
Kings county	830		449
Queens county	288		130
Richmond county.....	108		48
Total.....	8252		8629

The only bands specified were "E. Faber's gray." The erasers specified were E. Faber's mainly, with some items of Davidson, Dixon, and Eagle makes. There were also specified:

- 1050 E. Faber's rubber penholders, No. 10.
- 300 E. Faber's rubber penholders, No. 2.
- 166 E. Faber's rubber penholders, No. 44.
- 24 serrated edge 12 inch rubber rules.
- 220 Bailey's rubber sheets, 10×12.
- 24 Bailey's rubber sheets, 12×18.

UTILITY OF "LATEX" TO THE RUBBER TREE.

ONE of the speakers at the dinner of the New England Rubber Club, in November, was Professor George Lincoln Goodale, of Harvard University, whose remarks appear below:

MR. PRESIDENT AND GENTLEMEN OF THE CLUB: The subject on which I have been invited to address you, namely, the Milk Bearing Plants of the Tropics, touches one of the most interesting and difficult problems connected with plant life. That problem, briefly stated, is: Of what possible use to certain plants can be the milky juices which they produce? Most vegetable products have a clear and definite use to the plants which yield them, but it is almost impossible to explain the use to the plant of some of these milky juices. In some cases, the office of the milky sap is that of protecting the plant by its bitterness or its poisonous quality from unwelcome guests; but there are hundreds of species in which there is no suggestion of a poisonous character. In fact, in one instance, the milk is wholesome and so abundant that it is collected and used as food. In a few instances, the milky juices contain a considerable amount of starch and other nutriment, which would lead us to think that the milk vessels serve as store-houses of food for the plant. But there are many instances in which this is not true. Again, some of the milks in plants contain a peculiar kind of digestive ferment which serves an office in digestion, in some obscure way. In one conspicuous instance, this ferment is now separated and employed as a remedial agent for man. There does not seem to be any one explanation which covers all of the known cases.

Now the puzzle comes just here. In the tropics, plants have the fiercest struggle for existence between themselves, and sustain a continual competition of the most strenuous sort. Every species is obliged to avail itself of every advantage, however slight, in its unceasing war. Now what can be the utility of this store of rubber bearing milk to any herb or shrub or tree? In what way can the plant obtain from its presence in its bark, even the slightest ascendancy over its fellows?

It is well known that this fierce struggle for the mastery in the tropics brings about a remarkable isolation of kinds. You may find in a tropical forest or jungle, one of the plants of which you are in search, and then you may have to go a long distance before you find another like it. It is to this striking tendency to separation of sorts, that the principal difficulty in collecting certain of the finer sorts of rubber is attributable. Efforts of the most patient character have been made to bring these better kinds of rubber bearing plants together under cultivation, so that in artificial orchards the work of collection could be much lightened. In the experiment stations which I have seen in Ceylon and Java, experiments are now being conducted to this end, and with considerable prospect of success. Many of the less attractive sorts are now cultivated on this continent, as you all know, with more or less success, and it is the design of the experimenters in Ceylon and Java to carry the investigation out on scientific and commercial lines, with reference to the most promising kinds.

There is some reason to believe that many of the sorts now grown with only a limited success can be improved by careful selection and by other horticultural processes. Our Harvard botanic garden is just now establishing on a small scale an experiment station in Cuba, where such studies are being conducted. One of the first questions which confronts us there is the one to which I referred in the beginning of these remarks: Of what use to the rubber bearing plants, is the rubber itself? If we can get this clue, we can follow out the thread through the labyrinth with greater confidence. We can then under-

stand better the conditions under which the rubber is produced even in small quantities, in the plant, and we can perhaps secure and improve these conditions in cultivation.

If we remember that a seashore weed, the sugar beet, has been led along the lines of selection and intelligent cultivation, until it forms a strong rival to the sugar cane, we can believe that some one of the smaller rubber plants with a short cycle of existence, may perhaps be led along similar lines, until its yield of milky juice would be distinctly profitable. In these experiments and in the work of our Harvard botanical museum, we have the hearty coöperation not only of our foreign correspondents but of our efficient department of agriculture of the United States. I know that we shall have your interest also in this phase of our work.

IS THERE BALATA IN BRAZIL?

A LETTER comes to THE INDIA RUBBER WORLD from a gentleman in Pará, Brazil, who describes himself as the owner of an estate on the line of the railway extending from Pará to Bagança, on which has been discovered "Gutta-percha or Balata." He is under the impression that the tree is the *Mimusops balata*—the species which yields the Balata of commerce in Venezuela and the Guianas. Our correspondent is engaged in forming a company in Pará for exploiting the new product, and has forwarded samples of the gum to the United States, in order to have a valuation placed upon the same.

From time to time for years past reports have reached THE INDIA RUBBER WORLD of the existence of Gutta-percha in the Amazon valley, but it is not until now that samples have been available. Without stopping to question our correspondent's conclusions as to the botanical source of his samples, it is well to note that the product is radically different from any Balata now on the market. It is about the color of Balata, but it is not nearly as tough. In fact, it is quite brittle, and in value would be about half way between Balata and Almeidaia—say 20 cents a pound.

THE PROPERTIES OF FRENCH TALC.

A WESTERN newspaper recently gave considerable space to a description of the sufferings of beginners in certain factories from the flying fragments of powder used in preventing the raw gum from sticking to itself. The writer described the sufferer as being conscious of a burning, smarting sensation in the eyes, which were inflamed and watery and remained so, even after he had left the factory at night. He added, however, that after six months in the factory the flying powder was no longer noticed, and that eyes, ears, and noses might be filled with it without discomfort. The writer evidently referred to the use of French talc in rubber work, doubtless in the department of druggists' sundries. Where he got his idea, however, that it was particularly troublesome to the workmen it is difficult to understand. As a matter of fact, the powder is about as innocuous as air, and the men who work in it year in and year out are apparently the pictures of health and content. The real complaint against French talc comes from the manufacturers who suffer because it settles on cemented surfaces, and, flying everywhere, coats with its brownish whiteness goods that should be jet black, bright vermilion, or some other clear color. If the workmen, and the writer of the article above mentioned, are seriously concerned about the matter, let them set their wits to work to find a cheap method to dispense with it. They could thus save their eyes and line their pockets, for there is ready market for such an invention.

RECENT RUBBER PATENTS.

THE UNITED STATES PATENT RECORD.

ISSUED NOVEMBER 5, 1901.

- N**O. 685,769. Hoofpad. William J. Kent, Brooklyn, New York, assignor to Revere Rubber Co., Boston.
- 686,109. Nipple. Ferdinand Mulhens, Cologne, Germany.
- 686,126. Vehicle wheel. Robert G. Pilkington, St. Louis, assignor of one-half to Anderson Grats, Kirkwood, Missouri.

ISSUED NOVEMBER 12, 1901.

- 686,255. Tire for bicycles. Ben Broughton, Hamilton, Ontario.
- 686,281. Stomach pump. Walte Gerry, Ventura, California.
- 686,319. Self inflating tire for bicycles. Charles G. Morgan, London, England.
- 686,556. Means for securing elastic tires to wheels. James A. Swineheart and William A. Byrider, Akron, Ohio.

ISSUED NOVEMBER 19, 1901.

- 686,858. Means of attaching tire to rim. Alexander MacMahon, New York city.
- 686,901. Wheel tire. Hyman Lieberthal, Chicago.
- 686,965. Rubber vehicle tire. Raymond B. Price, Chicago.
- 686,990. Rubber horseshoe. Joseph H. Schroeder, St. Louis.
- 687,004. Hot water bag. Frank E. Crawford, Lakemills, Wisconsin, assignor of one-half to William A. Engsborg, same address.
- 687,005. Rubber tire setting machine. Calvin F. Darnell and John R. Duncan, Indianapolis, Indiana, assignors by direct and mesne assignments to Vehicle Rubber Tire Machine Co., same address.
- 687,045. Horseshoe pad. Daniel W. Maloney and James J. Welsh, White Plains, New York.
- 687,046. Stopper holder for water bags. Dennis B. Martin, New Haven, Connecticut, assignor to the Seamless Rubber Co., same address.
- 687,077. Diving dress. Frederick H. Sprang, London, England.

ISSUED NOVEMBER 26, 1901.

- 687,248. Hollow seamless rubber article. Thomas W. Miller, Akron, Ohio.
- 687,249. Process of forming hollow seamless rubber articles. Same.
- 687,502. Horseshoe. George L. Markley, Indianapolis, Indiana.
- 687,560. Vehicle tire. Walter K. Freeman, New York city.
- 687,578. Rubber boot or shoe. Augustus T. Schermerhorn, Newhope, Pennsylvania.
- 687,641. Billiard cushion. Samuel May, Toronto, Canada.

TRADE MARKS.

- 37,391. Pneumatic tires. Punctnot Tire Co., Camden, New Jersey; Philadelphia, and Boston. Essential feature, the word "Punctnot."

DESIGN PATENTS.

- 35,262. Horseshoe pad. Clark P. Wilder, Chicago, Illinois, assignor to Western Horseshoe Pad Co., same address. Issued November 5, 1901.
- 35,315. Ice or hot water bag. Christian William Meinecke, Jersey City, N. J., assignor to Meinecke & Co., New York city. Issued November 26, 1901.
- 35,348. Rubber shoe. Herbert Capron Mason, Woonsocket, Rhode Island, assignor to the Hood Rubber Co. Issued November 26, 1901.
- 21,254. John Titterington, 77, Colmore row, Birmingham. Pneumatic tires. October 23.
- 21,301. Arthur Thomas Collier, 11, Southampton buildings, Chancery lane, London. Elastic tires. October 23.
- 21,328. Samuel Miller, 31, Cannon street, London. Waterproof cover for protecting the holders of electric glow lamps. October 24.
- 21,334. Albert Ottowski, 218, Tottenham Court road, London. Improved rubber or elastic devices to fit the body for taking patterns for garments. October 24.
- 21,400. John Wheeldon, Bank buildings, Sheffield. Means for protecting the air tubes of pneumatic tires. October 25.
- 21,410. Roughsedge Wallwork and Charles Henry Wallwork, Manchester. Improvements in machines employed in the manufacture of cycle tires. October 25.

THE ENGLISH PATENT RECORD.

APPLICATIONS.—1901.

- 18,931. Joe Wassertrudinger, 221, Alleestrass, Barmen, Germany. Improvements in elastic weavings. September 23.
- 18,945. Charles William Scott Crawley, 44, Castletown road, London. Pneumatic tires. September 23.
- 18,964. Albert Charles Blossier, 40, Chancery lane, London. Improvements in the manufacture of sheet India-rubber. September 23.
- 19,004. Edward Hobbins Smith, 9 Exchange chambers, New street, Birmingham. Improvements in pneumatic and other tires. September 24.
- 19,013. James Williams, of The Oriental Waterproof Syndicate, Limited, Hackney walk, London. Improved method of waterproofing and rot proofing textile fabrics. September 24.
- 19,030. William Heale, 111, Hatton garden, London. Pneumatic tires. September 24.
- 19,092. Frank Reddaway, Manchester. Improvements in pneumatic tires and in woven bands particularly adapted for use in the same. September 25.
- 19,093. Albert Hadfield, Mark Henry Green, and Charles Gregory, of The Openshaw Tool Co., and James Dunlop, Manchester. Improvements in pneumatic and like percussive hammers. September 25.
- 19,107. Charles Shortt, Timahoe vicarage, Stradbally. Self detaching tire for cycles. September 25.
- 19,190. Alfred Henry Hornby, East Barnet, Hertfordshire. Pneumatic tires. September 26.
- 19,209. Albert Egerton Legh Slazenger, 8, Quality court, Chancery lane, London. Golf balls. [Frank Slazenger, United States.] September 26.
- 19,233. Edward Augustus Preston, 322, High Holborn, London. Pneumatic tires. September 26.
- 19,258. William Ross, 45, George IV. bridge, Edinburgh. Improvement in air tubes for pneumatic tires. September 27.
- 19,279. Louis Rougette, 81, Avenue Ledru Rollin, Paris. India-rubber horseshoe and method of fastening it. September 27.
- 19,291. Arthur Heaton, Herbert Arthur Dugard, Charles Davies, and Herbert Edgar Davies, Birmingham. Pneumatic tires. September 27.
- 19,541. Charles Miller, 11, Southampton buildings, Chancery lane, London. Vehicle wheels and pneumatic tires therefor. October 21.
- 19,645. Albert Marion Ferguson, 7, Staples inn, London. Single tube detachable pneumatic tire. (Date applied for under Patents, etc., Act, 1883, sec. 103, March 20, 1901, being date of application in United States.) October 2.
- 19,672. William Walter Leavenworth, 45, Southampton buildings, Chancery lane, London. Rubber tires for vehicle wheels. October 2.
- 19,705. James H. Whitehead, Caledon, County Tyrone. Improved cycle and motor car wheel for an unpuncturable tire. October 3.
- 19,713. William Arthur Griffiths, Birmingham. Covers of pneumatic tires. October 3.
- 19,832. Louis Ignatius Perry, 23, Southampton buildings, Chancery lane, London. Elastic tires. October 4.
- 19,862. Herbert Ellwood Irwin, Fife House, Kingston-on-Thames. Pneumatic tires. October 5.
- 19,883. Harry Panzetta and Edwin Childs, 167, Inderwick road, Hornsey, London. Improvements in hot plates for separating rubber from canvas or the like. October 5.
- 20,051. Isaac Seaman McGiehan, 100, Wellington street, Glasgow. Pneumatic tires for vehicles. (Date applied for under Patents, etc., Act, 1883, sec. 103, April 13, 1901, being date of application in United States.) October 8.
- 20,231. Thomas Hobley Stone and Edward Tufft, Birmingham. Pneumatic tires for cycles and vehicles. October 10.
- 20,253. Christian Hamilton Gray, 111, Hatton garden, London. Improvements in or relating to the manufacture of articles formed from plastic and similar substances. October 10.
- 20,532. Emma Steinburg née Hayem, 52, Chancery lane, London. Detachable clips for securing pneumatic or other India-rubber tires to wheels. October 14.
- 20,628. Eugene Louis Joseph Senechal de la Grange, 56, Rue de Londres, Paris. Insulating coating replacing India-rubber and Gutta-percha, for electric wires. October 15.
- 20,646. James Shepherd, 4, South street, Finsbury, London. Elastic tires for wheels. October 15.
- 20,748. Walter Herman Geilinger, 111, Hatton garden, London. Pneumatic tires. October 16.

- 20,826. Louis Ignatius Perry, 23, Southampton buildings, Chancery lane, London. Elastic tires. October 17.
- 20,853. Jens Henri Langgaard, 17a, South Castle street, Liverpool. Elastic wheel tires. October 18.
- 20,878. Claude Leon Boiron and Henry Bourin, 84, Chancery lane, London. Improvements in the manufacture of India-rubber articles. October 18.
- 20,879. *Same*. Improved process for the treatment of waste India-rubber. October 18.
- 21,054. The Self Sealing Air Chamber Co., Limited, and Alfred Franklin, 77, Colmore row, Birmingham. Improvements in tubes made of India-rubber. October 21.
- 21,087. George Croyden Marks, 18, Southampton buildings, Chancery lane, London. Improvements in rubber tires for vehicles. [The Consolidated Rubber Tire Co., United States.] October 21.
- 21,105. William Shone, 18, Buckingham street, Strand, London. Pneumatic ball tires. October 21.
- 21,204. Frederick William Schroeder, 9, Arundel street, Strand, London. Fastenings for securing solid rubber and pneumatic tires to wheels for vehicles, cycles, and motor cars. October 22.
- 21,251. Patrick Barry, 31, Flavel road, Wandsworth, London. Golf balls. October 23.

PATENTS GRANTED.—APPLICATIONS OF 1900.

- 9,550. Manufacture of lampblack. Browne, H. S., 24, Great Eastern street, London. May 24, 1901.
- 9,814. Rubber tire and method of securing to rim. Gregory, W. D., No. 24 Murray street, New York, United States. May 28, 1901.
- 9,835. Method of attaching rubber tire to rim. Stephens, A. Le R., No. 211 West 106th street, New York, United States. May 21, 1901.
- 9,891. India-rubber horseshoes with embedded bars. Paar, H., Canton, Ohio, United States. May 29, 1901.
- 9,906. Special process for preparing India rubber. Arnaud, A. L., Verneuil, A. V. L., Wehry, A. M. G., and Lebeuf, A. G., all in Paris, France. May 29, 1901.
- 10,046. Puncture proof pneumatic tire. Middleton, Henry A., Erie, Pennsylvania, United States. May 31, 1901.
- 10,232. Balata compositions. Miller, O. A., Brockton, Massachusetts, United States. June 2, 1901.
- 10,420. Pneumatic tires adapted for running on ice or snow. Charles, B., Evansville, Indiana, United States. June 7, 1901.
- 10,505. Ventilated shoe. Pearson, J. J., No. 40 Wall street, New York. June 8, 1901.
- 10,553. Syringe. Mosterts, F., 47, Holzmarktstrasse, Berlin. June 9.
- 10,567. Rubber tire and method of attaching. Steane, W., and Bissell, H. H., Leamington, Warwickshire. June 9, 1901.
- 10,626. Sectional pneumatic tire. Willis, P. R. J., Kingston-on-Thames, Surrey. [Bothwell, De W. H., No. 940 Ellicott square, Buffalo, New York.] June 11, 1901.
- 10,800. Waterproofing fabrics. Serkowski, S., Varsovie, Poland. June 13, 1901.
- 10,805. Combined balls and sponges. Marsh, F., Lee, Kent. June 13, 1901.
- 10,855. Armour plates. Donaldson, A. B., Dunseith, North Dakota, United States. June 14, 1901.
- 10,959. Pneumatic tires. Wood, W. C., Windsor, Berkshire. June 16, 1901.
- 11,005. Rubber tire and method of securing to rims. Firestone, H. S., No. 594 Forty-sixth street, Chicago. June 16, 1901.
- 11,027. Horseshoes. Wilkinson, H., and Bedford, E., Chapel Allerton, Leeds, Yorkshire. June 18, 1901.
- 11,331. India-rubber horseshoe. Lord, J. M., Kansas City, Missouri, United States. June 22, 1901.
- 11,405. Waterproof coats. Stewart, R. W. (trading as Scottish Central Rubber Co.) and Collins, L., Elgin Mills, Dunfermline. June 23, 1901.
- 11,468. Rubber tire. Parker, M., and Thompson, R., Broad Street House, New Broad street, London. June 25, 1901.
- 11,648. Cover for pneumatic tire. Vellere, A. F. W., Stanley Villa, Portia Green, London. June 27, 1901.
- 11,686. Rubber tire and method of attaching. Maculich, J. M., 36, Duke street, London, E. C. June 27, 1901.
- 11,931. Waterproof garments. Lipson, S., No. 4 Pepprell place Rosenberg, J., and Rosenberg, H., both of No. 90 Brighton street both in Boston, Massachusetts, United States. July 2, 1901.
- 12,151. Rubber heel tips. Furness, F. G., 43, Lambs Conduit street, and Hanson, C. J. W., 24, Harrington square, N. W., both in London. July 5, 1901.

- 12,269. Method of attaching tires to rims. Wise, W. L., 46, Lincoln's Inn Fields, London. [Calumet Tire Rubber Co., Chicago, Illinois, United States.] July 6, 1901.
- 12,281. Non puncturable pneumatic tire. Raine, J. W., Gateshead-on-Tyne. July 7, 1901.
- 12,318. Self inflating pneumatic tire. Nielsen, J. C. J., Naesby, by Soro, Denmark. July 7, 1901.
- 12,351. Air tube for pneumatic tire. Sloan, W. S., Boyle, Ireland. July 9, 1901.
- 12,433. Tubeless pneumatic tire. Baker, J., Meacham, Illinois, United States. July 10, 1901.
- 12,574. Pneumatic tire. Vercoc, T. H., 14, Walham Grove, Fulham, London, S. W. July 12, 1901.
- 12,597. Method of attaching rubber tire to rim. Whitaker, F. P., and Whitaker, E. C., both of Providence, Rhode Island, United States. July 12, 1901.
- 12,700. Pneumatic tire. Haddan, H. J., 18, Buckingham street, Strand, London. [Morris, W. B., Dunrea, Manitoba, Canada.] July 13, 1901.

LITERATURE OF INDIA-RUBBER.

A BRIEFER mention than it merited was made in THE INDIA RUBBER WORLD of September 1 [page 348] of the new *Journal d'Agriculture Tropicale*, of Paris, the interest of which to those engaged in the rubber business is that it purposes devoting much attention to the study of rubber yielding species, and also to the conditions bearing upon the cultivation of rubber. Four of the monthly issues of the *Journal* have now come to hand, and they fully bear out the initial promises made by the editor, Monsieur Vilbouchevitch.—Another medium through which may be expected much information of a scientific and practical character on rubber planting, particularly in the Far East, is the *Agricultural Bulletin* of the Straits and Federated Malay States, the first issue of which, dated October, 1901, comes from Singapore. It is edited by Mr. H. N. Ridley, M.A., F.L.S., director of botanic gardens and forests, and replaces the occasional *Bulletin* hitherto issued from the same source.

IN CURRENT PERIODICALS.

REISEBERICHT der Guttapercha-und Kautschuk-Expedition nach den Südsee Kolonien. By R. Schlechter. [Relates to Gutta-percha in British North Borneo, and experiments in planting; illustrated.]=*Der Tropenpflanzer*, Berlin. V-10 (October, 1901.) pp. 457-471.

Reisebericht der Gutta-und Kautschuk-Expedition Nach den Südsee-Kolonien. By R. Schlechter. [Devoted to Java and Borneo.]=*Der Tropenpflanzer*, Berlin. V-II (November, 1901.) pp. 539-543.

The Culture of Rubber in Mexico. By L. C. Groce. [Notes on comparative results of different methods of planting.]=*Modern Mexico*, New York. XI-4 (July, 1901.) pp. 29, 32, 33.

Rubber Planting at La Junta. By James Maunder. [Experiences in nursery making.]=*Modern Mexico*, New York. XII-2 (November 1901.) p. 28.

Rubber Culture in Nicaragua. [Embracing a report by Gordon Waldron, a Canadian interested in planting.]=*Advance Sheets of Consular Reports*, Washington. No. 1135 (September 10, 1901.) pp. 1-3.

Destruction of Pará Rubber by Caterpillars. By F. W. Douglass. (b) Report on the Attack of White Ants, or Termites (*Termes Gestroi*) on Pará Rubber Trees. By W. W. Bailey.=*Agricultural Bulletin of the Straits*, Singapore. I-I (October, 1901.) pp. 26-29.

La Plante Productive du Caoutchouc Donde et sa Signification Pratique. By Dr. Walter Busse. [Translated from *Der Tropenpflanzer*, from which the article has been catalogued in this department.]=*Revue des Cultures Coloniales*, Paris. IX-86 (October 5, 1901.) pp. 213-217.

Caoutchouc en Getah-pertja leverende boomsoorten. (Rubber and Gutta-percha yielding species.) By A. H. Berkhout. [Summarizing information contained in Dr. Preuss's "Expedition nach Central-und Südamerika."]=*De Indische Mercuur*, Amsterdam. XXIV-44 (November 5, 1901.) p. 817.



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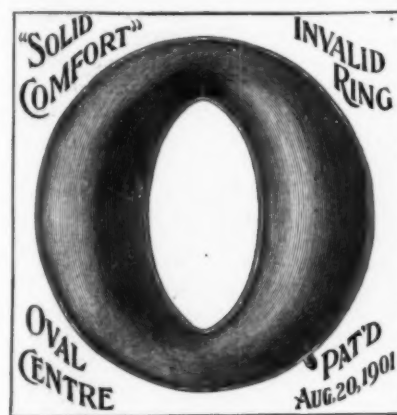
THIS vaporizer is made of glass and hard rubber—substances not affected by hydrogen dioxide mixtures. It is extremely simple in arrangement, and thus not likely to get out of order. Particularly it has no tubing such as would be liable to clog when using tinctures or balsams. It is, therefore, equally effective in the use of oils, tinctures, balsams, and aqueous solutions. A distinctive feature of this vaporizer is that which enables an abundant vapor to be produced with a few minims of liquid, thus obviating the waste of unstable mixtures. This may involve an important item of economy. Besides, the atomizer will not spill or leak its contents in case of accidental overturning. A United



States patent for this device was issued November 12, 1901, to Immanuel Lundquist. It is being placed on the market by the New York Surgical Appliance Co., incorporated October 10, 1901, under New York laws for the purpose of handling this and certain other new specialties. Their address is No. 1244 Broadway, New York. The retail price is \$1.50.

THE "SOLID COMFORT" INVALID RING.

A PROGRESSIVE New York house that has already produced many advanced specialties for invalids, has just given to the world a newly patented invalid ring, called the "Solid Comfort," a cut of which is shown below. In general appearance it does not differ greatly from the old style round rubber ring, although those who know about invalid rings will appreciate at a glance the advantage of the peculiarly shaped oval center.



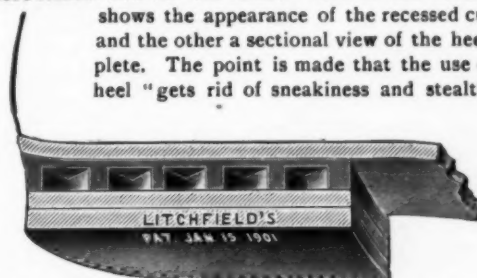
When in use, the old style ring with round center swells up in front and back, causing an uncomfortable pressure against portions of the body of the user. This not only gives the user an uncomfortable feeling, but is said by physicians to be a frequent cause of irritation in instances of gynecological or

rectal affections. This new cushion avoids these difficulties. Another serious objection to the old style ring or cushion with round opening is that there is no room for ventilation when the patient sits on the cushion, the opening being entirely covered when in use. With the oval center cushion, the buttocks cover only the center part of the opening, leaving the front and back parts open, thus securing perfect ventilation. There being no pressure in the front and back, constriction of the parts is avoided. The cushions have been shown to a

number of physicians, prominent trained nurses, and hospital superintendents, all of whom appreciate the benefits of this new style invalid ring. Five or six leading manufacturers have already made arrangements with Meinecke & Co. (New York), who control the patents, to manufacture these rings on a royalty basis. The rings are made in three sizes—13, 15, and 17 inches in diameter—and are to be sold at uniform prices by all manufacturers. In this connection it may be stated that the oval center refers not only to the round rings, as Meinecke & Co. have also secured patents on an oval shaped cushion, a square shaped cushion, and a seat shaped cushion, all with oval center openings. The patents are protected against infringement by The Patent Title and Guarantee Co. (New York).

THE LITCHFIELD CUSHION HEEL.

THIS heel, for which a patent was issued January 15, 1901, to John F. B. Litchfield, Worcester, Mass., is a combination of a recessed rubber cushion, coming next to the heel seat, with one or more leather lifts for the tread. One of the illustrations shows the appearance of the recessed cushion, and the other a sectional view of the heel complete. The point is made that the use of this heel "gets rid of sneakiness and stealthiness,



which are very potent objections to the outside rubber heel, the leather top lifts and slugs making a noise when walking." Besides, the heel is not slippery on wet ice and mud. It possesses the other advantages claimed for rubber heels. When



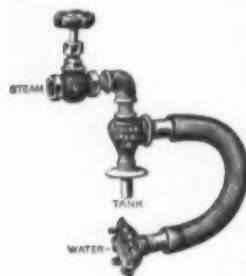
the leather lifts become worn, they can be removed without disturbing the rubber cushion, and new lifts put in place. The rubber cushions, made for the owners of this patent at a Boston rubber factory, are sold to leather shoe manufacturers, who build up the heels with leather to the desired height. Arrangements are now making, however, to cater to the cobblers' and repairing trades by offering the heel

complete. In order to carry on the business of assembling the rubbers and leathers, the owners of the Litchfield patent are looking for a factory site, in some important shoe center, where some of their capital stock can be placed. One town mentioned in this connection is Southbridge, Mass.—The Litchfield Cushion Heel Co. was incorporated in March, 1901, under the laws of Maine, with \$100,000 authorized capital, to exploit the above described heel. Their offices are at No. 828 Colonial building, Boston, and No. 74 Russell street, Worcester, Mass.

THE LOCKE EJECTOR OR TANK FILLER.

THE operation of this device is exceedingly simple. The carriage is backed up to the water supply; the hose, with strainer attached, is thrown into the water, and the little steam valve opened. Water is sucked up by the vacuum, and the tank is filled in a very few minutes, with no material reduction in the steam pressure. As shown in the accompanying cut, the water and steam connections are necessarily abbreviated. About six feet of hose is used, which can be coiled neatly when not in use, and easily carried on top of the tank. The valve is operated from the seat. No bucket is needed.

The new device is understood to be meeting much favor from the owners of steam automobiles. The manufacturers are the Locke Regulator Co., makers of steam appliances, Salem, Mass. The cut shown above is supplied from the agency of Charles E. Miller, No. 97 Reade street, New York.



THE "PILGRIM HEEL" RUBBERS.

OF the two shoe illustrations here presented the worn-out shoe gives eloquent evidence of the exceedingly weak spot in the ordinary type of rubber shoes. In other words, the heel breaks away first just about as the illustration shows. The "Pilgrim" heel is designed to overcome this by a reinforcement at

the weakest part. As the manufacturers very happily say—quoting Garfield—"Things don't turn up in this world until somebody turns them up. We have, therefore, 'turned something up' and call it the 'Pilgrim heel.'" A further advantage of the heel is that, it prevents the short fit by not allowing too long a foot to go into a rubber. It is manufactured by the Hood Rubber Co., Boston.



RUBBER STAMPS AND POTTERY WORK.

THE rubber stamp has quietly insinuated its way into almost every industry. Perhaps its most interesting triumph has been in the field of ceramics. The trade mark, usually an intricate coat of arms, is applied to the article before its firing with a stamp made of the very best grade of stamp gum. The inks used are so severe on the rubber, however, that the stamps last only a little while, and the trade in them is really quite considerable.

DICK'S BALATA BELTING is prominently advertised in the Mexican newspapers, as well suited for use in that country. It is said to be in extensive use in the states of Yucatan, Campeche, Jalisco, Durango, and Mexico. A dealer in the city of Mexico announces that he keeps this belting in stock, in sizes from 1 to 20 inches.

BUILDING A CABLE FOR MEXICO.

THE Safety Insulated Wire and Cable Co. (New York) are manufacturing under contract for the Mexican government a submarine cable, to be laid between Vera Cruz, Frontera, and Campeche. The cable is to be rubber insulated, and 472 nautical miles in length; there must be enough to reach a depth of 49 feet in the port of Campeche and 65 feet in the ports of Vera Cruz and Frontera. The cable is to consist of nine copper wires, protected by sixteen galvanized iron wires for deep water and eighteen additional steel wires for the coast. The cable is to be ready for service on April 2, 1902. The contract price is \$600,000, gold, of which \$283,000 is to be paid upon the laying of the cable and the balance within two and four months thereafter.

THE LARGE PARA RUBBER CROP.

[FROM THE "NEW-YORKER HANDELS ZEITUNG," NOVEMBER 9.]

THE manufacturers of rubber boots and shoes, whose business for the past two years, owing to the absence of snow in large quantities, has been poor, and who have been repeatedly compelled to cut their prices in order to rid themselves of accumulated stocks, are much pleased at the receding tendency in the crude rubber market, which has lowered the prices during the last two months 10 cents per pound. While the leading brand, "Upriver Pará" was, in August last, still quoted at 90 cents, and a year ago at 93 cents, it can be had now at 82 cents, and it is likely that the prices will go below the present level. At these declining prices little animation exists in the market, the manufacturers, in expectation of a large crop this year, and consequent lower rates, withholding any large purchases. It is possible that the drop in the prices of crude rubber will enable the manufacturers to close their yearly account more satisfactorily than had been anticipated.

One of the principals of the importing firm of Reimers & Co. discoursed to a representative of the *New-Yorker Handels-Zeitung* as follows: "The statement that the stocks at first hand in Pará have been disposed of, and that therefore the European markets are retaining a firm position, with an upward tendency, is without foundation. As a matter of fact the stocks of crude rubber at Pará are 1200 tons in excess of those at the same period last year, and at that time the offers were larger than ever before. The European markets show the same dullness which dominates our markets, and reports have been received stating that sales over there had been made at 1½d. lower than was asked for the same qualities a week ago. The large stores of crude rubber are not traceable as much to a weak market in rubber goods, as to the excessive offers of crude rubber, a much larger crop having been brought in this year than last year and the year before that. That the prices of Pará rubber will show a material change for the better is not to be expected—Africa bringing continually larger quantities of crude rubber into the market, and offers from that source having become an important factor in the rubber situation. Five years ago only about 200 tons of African rubber were brought into the Antwerp market; last year it ran up to 7000 tons, and the crop this year will at least equal that of last year. These heavy offers of African rubber will have a tendency to continually crowd the Brazilian product out of the Antwerp market, and therefore a larger quantity will reach our market here. Under these conditions prices dropped considerably, but, through this the inquiries from consumers have become more animated, the industries using rubber in their manufactures being, generally, well employed."



REMADE DE MALES—A RUBBER STATION ON THE RIVER JAVARY.

[PHOTOGRAPHED BY MR. GEORGE RIDERHALGH FAIRBANKS.]

A TYPICAL RUBBER TOWN IN BRAZIL.

THE view at the head of this page is that of a rubber station on the river Javary, which forms the boundary between Brazil and Peru. It is a town with a population of only about 200, increased at certain seasons by an influx of rubber collectors, but it is nevertheless an important town in the upper rubber region of the Amazon. Here is the seat of a magistrate's court, and a branch of the Brazilian custom house. The name of the place is Remate de Males—"the last [or worst] of the maladies"—a name due to the great mortality from malarial diseases. The town can boast only of a single street, extending between the river and a row of houses, about a mile in length.

The location of Remate de Males is not on the Javary, properly speaking, but on a small tributary of that river, on the Brazilian side, about 30 miles above the junction of the Javary with the river Amazon. A few houses are situated on the opposite side of the river. In the center of the picture appear some rubber warehouses, including that of Messrs. Marius & Levy, *aviadores* and exporters, who have establishments at various points in the Amazon country, and in Liverpool and Paris. The steamers of the Amazon Steam Navigation Co. and other lines proceed up the Javary to the branch stream referred to, turning in at Remate de Males and going no further upstream. The Comptoir Coloniale Français, engaged in gathering rubber and shipping it direct to Europe, have a branch at Remate de Males, also included in the picture, though their principal warehouse is at Nazareth, on the Javary proper, at a short distance below the tributary on which Remate de Males is situated.

The river Javary, by the way, has been a less important producer of rubber of late than formerly, which is due chiefly to the exhaustion of the once rich supplies of Caucho on that stream, though it is said that new Caucho trees will soon be ready for destruction. The fact that the export duties on rubber are so much higher in Brazil than in Peru has always been an incentive to smuggling along the Javary, which forms the

boundary between the two countries. Much rubber from the Brazilian side has been sent across the river secretly, to be shipped as the product of Peru. A difference in the rate of duties on imports into the two countries has led to similar attempts at defrauding the customs in respect to foreign merchandise. The customs regulations of late, however, have begun to be better enforced.

SOME WANTS OF THE RUBBER TRADE.

[213] A CORRESPONDENT writes: "We have a sample of what is called pure Pará tape, used for winding wires for electrical transmission. This article is put up in France, rolled on paper disks the width of the tape, so as to be ready to use on winding machines. Can you put us in communication with the manufacturer of this article?"

[214] From Chicago: "Can you inform us who manufactures or puts on the market hard rubber scrap?"

[215] From a rubber jobbing house: "We should like you to advise us who are the different manufacturers of hard rubber combs in this country."

[216] From a jobber: "Kindly advise us who are the manufacturers of light weight fairy air balls."

[217] From a rubber factory: "Can you give us the addresses of several parties who make marlin, which is used for covering steam hose?"

[218] From Chicago: "Will you kindly name the parties who make the metal connections for syringes?"

[219] From a rubber planting company: "Has any progress been made recently toward the discovery of a substitute for rubber, about which, every now and then, something appears in the newspapers?"

[220] From a jobbing house: "I am desirous of learning the date and number of the United States patent covering Kiel's compound, and of learning whether the same has expired."

[221] From Baltimore: "Would you inform me where I could get a list of the different brands of belting, hose, packings, etc., made by the various manufacturers?"

"COMPOUNDING RELIGION WITH RUBBER."

TO THE EDITOR OF THE INDIA RUBBER WORLD: In the December number of your journal was an article under the above caption. It attracted my attention for the reason that it contains some criticisms on my methods, and also on the company which I represent. I am aware that a newspaper controversy is not a fair fight, as the editor can have the last word on every issue, and in every issue of his paper. I have no desire to enter upon a trial by newspaper for that reason, but as you have opened your columns to me I accept the courtesy and have a few things to say.

I do not represent the Chiapas company in this matter. It can stand on its merits, and its plantation is not "a myth." I will say, however, that the statement quoted in your November, 1900, issue, that "thus far it would seem that the planting done by this company has been done only on paper, and that paper not such as will bear very close scrutiny," was not true when first published, and is not true now. There are many companies which have done more planting on paper than the Chiapas; but I do not think you can name one Mexican plantation company that has done so much planting on its land within the past two years.

As to my pamphlet and circular letter from which you make extracts, followed with adverse criticisms, I would say: it is true that I have quoted from Consul Guenther, as many rubber companies do, but the quotation is not an important one. Our proposition is not built on it, and it would not fall if Guenther's statement should prove to be unreliable.

My method of reaching different classes of people through circular letters does not concern the public, and I question the wisdom and good taste of your journal in referring to the matter at all. The circular letter to ministers is read by an intelligent class of men who understand the proprieties, and who would be the first to detect anything that was unfair or in bad taste. I would be the only one to suffer by my lack of wisdom or propriety.

The statement that "100 pounds of rubber have been taken from an old tree at a single tapping" was made on the authority of an intelligent and reliable gentleman who has spent more than twelve years in the state of Chiapas, and who is well known both in Mexico and the United States. He stated in the presence of several witnesses that he had seen 100 pounds of rubber taken from one tree at a single tapping. He is not interested in any rubber company, but has bought rubber for years, and has been in "the bush" himself, and seen many things that most so-called "practical rubber men" have not seen. I cannot use the gentleman's name without his consent, but I shall believe that he saw 100 pounds of rubber taken from one tree at a single tapping until some one proves that he did not. "Practical rubber men" in New York city or elsewhere do not know all the facts yet in regard to rubber and the rubber tree. The Chiapas company has men in the field, well to the front, and it is possible that they may learn some things about the business that are not generally known. The fact that they are not generally known does not prove them to be untrue.

I have stated that the cost of transporting rubber is an inconsiderable item compared to the value of the product. When the large plantations in Chiapas are able to ship rubber in large quantities, I have reason to believe that the cost of transportation will be less than 1 cent per pound. At the same time none of the matters above referred to are of essential importance. The rubber business can stand on its merits whether these things are true or merely matters of opinion.

There is no attempt in my letters or literature to confound religion with the rubber business in any offensive way. I have not even claimed that I "had religion." In writing to different classes of people I state certain facts about myself with the purpose of getting my literature read. If sales result they are made on the merits of the proposition. If some elements of practical religion, the golden rule, for instance, were compounded with all kinds of business, including journalism, it would be better for us all.

A. J. SCOTT.

No. 125 La Salle street, Chicago, Ill., December 18, 1901.

MR. L. H. BONESTELL, president of the Chiapas Rubber Plantation and Investment Co. of California, informs THE INDIA RUBBER WORLD:

"Mr. A. J. Scott, of Chicago, has a contract, for a specified time, to sell the 'harvest certificates' of our company, each representing one acre of land in our plantation, up to 6000 acres. We do not sell anything to Mr. Scott, but he stands in the relation to us as agent in Chicago and its vicinity. In order to facilitate sales, Mr. Scott has seen fit to organize a separate company, under the name of the Chicago-Chiapas Rubber Plantation Co., which I understand has been incorporated. With regard to the means which he has employed to make sales we have no knowledge; nor are we responsible for any statements contained in his circulars. But all sales made by Mr. Scott are subject to the same conditions as those made from the company's headquarters in San Francisco."

[THE INDIA RUBBER WORLD has no desire to discourage any legitimate enterprise. On the contrary it desires to see the utmost development of the rubber planting interest. We are unwilling, however, to see the legitimate business of cultivating rubber discredited by such misleading statements as have been put forth by some company promoters without making a protest, even though our attacks should involve "a minister in good standing," as Mr. Scott, in his circulars, describes himself to be. Thus, it would be a fair inference from advertising matter distributed by Mr. Scott that a yearly profit of \$19,800 per acre would be possible from growing rubber on the plan of the company which he commends to any "man who believes in the Gospel." This estimate is based upon his assertions that a rubber tree has yielded 100 pounds at a single tapping, that the rubber is worth \$1 a pound, of which 99 cents is profit, and allowing 200 trees to the acre. If Mr. Scott really wants to advance the rubber planting industry, let him deal with the profits possible from a yearly yield per tree of two pounds of rubber, worth in New York at this time 55 cents a pound, and we shall be quite content to let him have "the last word." Meanwhile we offer as a reward for the identification of the man who saw 100 pounds of rubber gathered from one tapping of a single tree, an edition *de luxe* of "Baron Münchhausen's Narrative."—THE INDIA RUBBER WORLD believes that a good deal of planting has been done lately by the Chiapas company, and as soon as trustworthy information regarding the same can be obtained, it will appear in these pages.—THE EDITOR.]

THE commercial agent of the Dominion of Canada at Sydney, New South Wales, reports in regard to rubber goods: "This line of manufactures is one that has a promising future. The figures in the returns are no indication of the business done. The agent of one [Canadian] manufacturer states that his sales here last year amounted to £5000; some mistakes have been made on the part of one or two shippers which has hindered trade, but they are not likely to recur. Good orders have been forwarded this year."

NEWS OF THE AMERICAN RUBBER TRADE.

MR. FLINT OUT OF THE UNITED STATES RUBBER CO.

THIS announcement, emanating from the office of Charles R. Flint, of New York, was made public on December 16:

Mr. Charles R. Flint has resigned as a director of the United States Rubber Co. Mr. Flint states that large and new interests have come into the company and that his own interest at this time was too small longer to justify his attention to its affairs.

On July 25 last Mr. Flint resigned the position of treasurer of the company, which he had held almost from the beginning, and to which he had been reflected at the annual meeting in May. Mr. Flint's name has been connected closely with the affairs of the United States Rubber Co. since its first inception. He was a party to an agreement, dated February 1, 1892, with the New York banking house of H. B. Hollins & Co., who held options on the rubber shoe factories which later came into the combination, by which agreement Mr. Flint shared in the promoters' profits. He did not, however, sign the incorporation papers, filed in New Jersey, March 30, 1892, nor was he on the original board of directors, as was Mr. Hollins. The original officers, by the way, and several of the directors, were not rubber manufacturers, but financial men who had assisted in organizing the company, and who retired, one by one, as rubber factories were acquired and their former owners were prepared to join the board. The first treasurer was John P. Townsend. At a stockholders' meeting on October 15, 1892, Charles R. Flint was elected a director, immediately after which he became treasurer of the company and a member of its executive committee. On October 27, 1892, was issued the prospectus of the company, offering its shares to the public. From that date Mr. Flint was always recognized as an influential factor in the company's management. He was not to be seen at its offices, however, except at directors' meetings, not even having a desk there. When Senator Lexow undertook an investigation of trusts, some five years ago, he evidently thought, by questioning Mr. Flint, to get at the fountain-head of information regarding the "rubber trust." Mr. Flint, on the witness stand, admitted that he "took part in bringing about the organization," after which the printed record runs:

Q. [By Senator Lexow.] Is it not a fact that you, while not in name, are in fact the head of this United States Rubber Co.? A. I cannot claim that distinction.

Q. Is not that understood? A. Some people may have that idea.

Q. Isn't it generally understood? A. I cannot say.

Q. Why, don't you care to take that flattering unctious to your soul? A. I shouldn't like to admit it.

Mr. Flint was succeeded as treasurer of the United States Rubber Co. by James B. Ford, a member of the directorate from the beginning.

OUT OF "RUBBER GOODS" ALSO.

At a meeting of the board of directors of the Rubber Goods Manufacturing Co., on December 18, the resignation of Charles R. Flint, both as chairman of the board and as director, was accepted. It is given out that Mr. Flint has determined to devote his attention actively to carrying out his plans for the organization of an international crude rubber company, a charter for which was obtained in New Jersey a year ago. His brother, Wallace B. Flint, treasurer of the Rubber Goods company, also resigned. At the same meeting Arthur L. Kelley, who represents on the board the Mechanical Fabric Co. interests, was

elected president of the Rubber Goods Manufacturing Co., to succeed Charles Stewart Smith, and Alden S. Swan, of the firm of Swan, Finch & Co., was elected treasurer in place of W. B. Flint. Mr. Flint is also credited with the intention of bringing about a combination of the rubber industry on a larger scale than has yet been attempted. The position of chairman of the board of directors, made vacant by Mr. Flint's resignation, had not been filled, at last accounts.

ANOTHER GOODRICH EXTENSION.

PLANS are being drawn for another addition to the buildings of The B. F. Goodrich Co. (Akron, Ohio), on which work will be begun before the close of winter. It is to be a three story brick structure, about 50x250 feet, for general extension and warehouse purposes.

DIAMOND RUBBER CO.—INCREASE OF CAPITAL.

THE Diamond Rubber Co. (Akron, Ohio) having decided upon an increase of capital in November last, a charter has been taken out under West Virginia laws, authorizing the issue of additional shares to the extent of \$1,000,000, to take place at this date. For three years past the company have been adding to their plant and their product, and hence have been confronted with the need of a larger capitalization than \$500,000—The Diamond company will begin work this month in their new tire building—a five story structure 325x60 feet. The space hitherto devoted to their tire manufacture will now be utilized in the extension of their output of general mechanical goods. Six years ago the company, then capitalized at \$50,000, occupied but one building—that vacated a short time before by the Diamond Match Co. Now they occupy five large buildings at the main factory, and a building at Hale, one mile south of this.

THE GUTTA PERCHA COMPANY'S EXTENSION.

REFERRING to a report in regard to the Gutta Percha and Rubber Mfg. Co. (New York) in our last issue [page 85], it should be said that, through an inadvertence, some errors crept into it. What it was intended to say was that the company are making extensive additions and improvements to their works on Franklin and Skillman avenues, Brooklyn. A new power press is installed, and a Custodis chimney has been erected to accommodate four Babcock & Wilcox water tube boilers of 300 HP each. Their sprinkler system has been enlarged and carried over the entire plant, supplied by a 1500 gallon water tank supported on steel frames. The company have contracted with the Farrel Foundry and Machine Co. for several mills and calenders; also for a large four platen press of new design and great power. All of these various improvements are now about completed.

TRADE MARK LAW IN CANADA.

THE Boston Rubber Shoe Co. recently brought an action in the exchequer court of Canada, against the Boston Rubber Co. of Montreal, for alleged infringement of the former company's trade mark, the essential feature of which are the words "Boston Rubber Shoe Company." This trade mark has been registered in Canada. The Montreal company have used a somewhat similar trade mark, which has not been registered. The defense set up was that the charge that the defendants were using a trade mark essentially identical with that of the plaintiff was not a sufficient allegation to entitle the plaintiff to

judgment. But the court held: "Imitation involves knowledge; and if one, by a trade mark attached to his goods knowingly imitates another's trade mark, I do not see very well how he is to expect a court to find that the thing is done innocently."

PURE GUM SPECIALTY CO. (BARBERTON, OHIO.)

THE business of this company has increased steadily of late, to such an extent that they have been able to purchase the factory building hitherto occupied by them—that of the Barberton Bending Works—in addition to which the company have erected a nice, comfortable office building, which they also now occupy. Several new articles have been added to the list of the company's products, including a seamless hot water bottle, syringe bag, and combination water bottle, manufactured under a United States patent granted October 15 last, to their general manager, Harvey F. Mitzel.

CHANGE OF NAME.—INCREASE OF CAPITAL.

THIS announcement was issued from Youngstown, Ohio, December 1:

The Mahoning Rubber Manufacturing Co. begs to announce that, the above name having been found undesirable, the style of the corporation has been changed to The Republic Rubber Co., and all correspondence should be so addressed. The change is simply a change of name, and in no way affects the contracts of the Mahoning Rubber Manufacturing Co.

A certificate to the same effect was filed with the secretary of state of Ohio on December 2. The announcement of still another name for this company, in the last issue of this journal, was premature.—A later report is to the effect that the capital of the company will be increased from \$400,000 to \$600,000.

RUBBER GOODS MANUFACTURING CO.

THE directors met in New York on December 6 and declared the regular quarterly dividend (No. 11) of $1\frac{3}{4}$ per cent. on the preferred stock of the company, payable out of current earnings on December 17 to holders of record of December 9. No statement was made respecting a common stock dividend, though none has been paid since July 15, 1901.—Following is a record of transactions in Rubber Goods shares on the New York Stock Exchange:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Nov. 30	2,000	27	24 $\frac{1}{2}$	300	77	77
Week ending Dec. 7	1,802	25	23	1,110	75	71
Week ending Dec. 14	4,900	23	19	1,050	69	65
Week ending Dec. 21	3,950	20 $\frac{1}{2}$	18 $\frac{1}{2}$	1,500	73	68

In an article on the distribution of stock of industrial combinations, the New York *Journal of Commerce* gives the following figures regarding the two rubber manufacturing companies that come under this heading:

	Capital Outstanding.	No. Stock-holders.	Average No. Shares.
Rubber Goods Manufacturing Co., common.....	\$16,941,700	550	308
Rubber Goods, preferred.....	8,051,400	675	119
United States Rubber Co., common..	23,666,000	1330	178
United States, preferred.....	23,525,500	3022	78

Commenting on its table, the *Journal of Commerce* says that "in a general way the distribution of stocks has proceeded furthest in the case of companies with good dividend records, although other considerations of a more temporary character at times offset this consideration." In the case of Rubber Goods Manufacturing Co. which shows only a moderate distribution of its common stock, despite the fact that that issue has paid several dividends, there is an exception to this rule,

which may be in part accounted for by the recent cessation of dividends on the common stock. This influence undoubtedly led to considerable liquidation and apparently the stock so sold has been accumulated by fewer interests.

WHOSE RUBBER SHOES ARE THESE?

A BOSTON firm, making a specialty of the sale of "factory damaged and out-of-style rubbers only," depart from their announced custom sufficiently to offer for sale a list of "First Quality Rubbers," described as "fresh, perfect," and "up-to-date style." The advertisement runs:

These goods were manufactured by one of the leading rubber companies, whose goods are exceedingly popular. More than a liberal amount of pure Para rubber was used in the making and one of the best-known



expert compounders of rubber superintended this, the most important part of the rubber manufacturing business, which ought to insure the best results. We have pledged ourselves to divulge neither the original brand or maker's name, the brand having been nicely smoothed off in order that we may dis-

pose of these goods without disturbing to any great extent jobbers who sell this famous line at full prices. Customers will be furnished, free of charge, with the "Independent Rubber Co." labels like above cut, which they can put on these rubbers. This we would gladly do ourselves, but hurry orders are coming in to such an extent, it would be out of the question to attempt it in any case during the present rush.

CHICAGO HEADQUARTERS FOR RUBBER MEN.

THE Boston Woven Hose and Rubber Co. have issued from their Chicago branch—Nos. 185-187 Lake street—an invitation in the following terms:

"We have recently fitted up in our Chicago store a room for the express use of our customers and friends, who may happen to be in the city. This room contains the daily papers, magazines, writing materials, etc., and we cordially invite you to avail yourself of its use. We are most happy to extend the services of our stenographers to you, and shall be glad to have you make our store your headquarters while in Chicago, have your mail sent here, and we will be glad to give you every facility in our power."

INDEPENDENT RUBBER CO. (AKRON, OHIO.)

LESS than a year ago work was begun in a small building attached to a residence on Bowery street, Akron, in the manufacture of rubber specialties, which has grown until there is now about to be incorporated, to carry on the business, The Independent Rubber Co., with \$5000 capital. They purpose erecting a two story brick factory, 50 X 30 feet, for the manufacture of a full line of gloves and other dipped goods, adding after awhile compounded goods. Louis Stark will be president, John Linn secretary and treasurer, John Dildine superintendent, and Elmer Lundgreen manager.

NEW PLANT OF THE MILFORD RUBBER CO.

IN spite of the fact that the Milford Rubber Co. (Milford, Massachusetts), have, during the year past, reached a yearly capacity of 1,000,000 yards of proofed goods, they have been unable of late to keep up with their orders. They therefore have purchased a new plant, a part of which they already occupy, and by the time that this reaches the reader's eye, will be fully equipped and running. The plant is a modern, four-story brick building, 200 X 35 feet, with engines, boilers, sprinklers, electric lights, and every modern convenience. Indeed, so well is the factory equipped, that it is said to have obtained the cheapest insurance rate of any proofing plant in the world. The company, this year, will make a specialty of the proofing of triplex goods, and when their new mixing mills and spread-

ers are set up, they will have a capacity of 100,000 yards a week. They will not, by any means, neglect the trade they have built up in other lines of proofing, but have equipped themselves to fill orders of any amount in the proofing of mackintosh cloth, skirt binding, etc.

END OF THE FARGO CASE (CHICAGO).

THE last has again been heard of the case growing out of the failure of the old shoe jobbing house of C. H. Fargo & Co. [see THE INDIA RUBBER WORLD, June 1, 1901—page 277.] Judge Grosscup, of the United States circuit court in Chicago, on November 19, fixed the attorney's fees in the case. The assets of the Fargo company, amounting to \$125,000, having been turned into cash. The amount paid to the solicitors, in fees and expenses, was about \$28,000. The remainder of the assets was to be distributed among fifty or more creditors. The order, issued in the court was in approval of the report of H. W. Bishop, master in chancery.

AMERICAN CHICLE CO.

THE regular quarterly dividend of $1\frac{1}{4}$ per cent. on the preferred stock and of 2 per cent. on the common stock is payable January 2 to holders of record on December 26. Late market quotations have been 77 bid and 80 asked for common and 78 bid and 80 asked for preferred.—It was announced lately that the capital stock of the company was to be increased, in order to extend both its manufacturing facilities and the control of the raw Chicle trade. The increase was to be from \$3,000,000 to \$4,000,000 in preference shares and from \$6,000,000 to \$8,000,000 in common shares. At a meeting of the shareholders in New Jersey, on December 20, no vote was taken on this question, and the proposition was abandoned.

A TOWN RULED BY A LABOR UNION.

THE strike last summer at the works of the Farrel Foundry and Machine Co. (Ansonia, Conn.)—manufacturers of rubber machinery—had a political outcome that is attracting more than local attention. Among those who were enjoined by the courts from interfering with the non union workmen employed by the Farrel company in the place of the strikers was Stephen A. Charters, president of the Carpenters' union. Coming to be regarded as a martyr in the cause of labor, Charters was nominated for mayor of Ansonia, and in November was elected. As the mayor in that town has the appointment of practically all the other officials—over fifty in number—Ansonia now has a labor union government, in the hands of persons having little experience in public affairs, and the result is being looked for with much interest.

SCRAP RUBBER PRICES DECLINING.

INTERVIEW with a New York dealer, December 13: "The market for scrap is dull, with a declining tendency. A fair quotation for old shoes, standard packing, carload lots, would be 8 cents a pound; possibly business could be done at $7\frac{3}{4}$ cents. We are still making deliveries at $8\frac{1}{2}$ cents, but on orders booked some time ago. A period of dullness is not unusual just preceding the end of the year, at the season of stock taking in the rubber factories. But the present state of the market is due largely to stocks held over from last season, which may be estimated at 1800 tons in the hands of large dealers, besides an uncertain amount held by smaller operators. Two years ago rubber scrap went up until we paid as high as 11 cents; we heard of business being done at $11\frac{1}{4}$. No further back than the beginning of 1898 the market had ruled at about $4\frac{1}{4}$ cents, and the possibility of such advances occurring encouraged a speculative element in the trade. Of course a marked decline followed the high prices I have mentioned, but another big advance seems to have been expected in the fol-

lowing year—that is, last winter—in preparation for which stocks were accumulated, but the highest price reached at that time was only $9@9\frac{1}{4}$ cents. There were holders who declined these figures, and they have since been piling up costs for interest and storage on stocks that now must be considered in sizing up the market. Similar conditions affect the market for foreign scrap. Our house has been offering imported shoe stock at $6\frac{1}{4}$ cents, but we now have offers from abroad of 100 tons, for forward delivery, at $6\frac{1}{2}$ cents.

"The prices we have paid for domestic shoes at different periods have been:

MONTHS.	1899.	1900.	1901.
January	$6\frac{1}{4}$	$9\frac{3}{4}@10\frac{1}{2}$	$8\frac{1}{4}$
July	$8\frac{1}{2}$	9	$8\frac{1}{4}$
December	11	9 @ $9\frac{1}{4}$	8

"We are aware that in some cases higher prices have been paid, and of course also possibly little lower prices, but these are the general average for the months named. These prices might not suit the western market, nor, in some cases, the eastern market; but the most that can be done in any summary of the scrap rubber trade is to give average prices."

THE INDIA RUBBER WORLD from time to time has printed comparative statements of the prices of rubber scrap covering a number of years. The record is now brought down to the end of 1901, as follows:

YEAR.	High.	Low.	Average.	YEAR.	High.	Low.	Average.
1887	$5\frac{1}{2}$	$4\frac{1}{2}$	5	1895	$5\frac{1}{4}$	4	$4\frac{3}{4}$
1888	$5\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	1896	5	4	$4\frac{1}{2}$
1889	$4\frac{1}{4}$	$3\frac{3}{4}$	4	1897	5	4	$4\frac{1}{4}$
1890	$4\frac{1}{4}$	$3\frac{3}{4}$	4	1898	$6\frac{1}{2}$	$4\frac{1}{4}$	$5\frac{1}{2}$
1891	$4\frac{1}{4}$	3	$3\frac{3}{4}$	1899	$11\frac{1}{4}$	6	9
1892	$3\frac{1}{2}$	$2\frac{3}{4}$	3	1900	$10\frac{3}{4}$	8	$9\frac{1}{2}$
1893	$5\frac{1}{8}$	$3\frac{1}{2}$	4	1901	$8\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{4}$
1894	6	4	5				

Owing to the extraordinary and violent fluctuations during 1899 and 1900 it is practically impossible to fix an average value for a year as a whole, as this would depend on the quantities purchased by different consumers at the varying prices, which is an unknown factor. However, the figures above stated represent the best judgment of important firms in the trade.

Quotations printed in this journal two months ago were $8\frac{1}{4}@8\frac{3}{4}$ cents for domestic and $6\frac{1}{2}@7$ cents for imported shoes. Just before printing the present issue quotations supplied to us are 8 cents for domestic and 7 for foreign.

CURTAILING OILCLOTH PRODUCTION.

ONE of the factories of the Standard Table Oilcloth Co.—located at Astoria, Long Island, N. Y., and operated formerly by Joseph Wild & Co.—has been advertised for sale. An official of the company, in a published interview, is quoted as saying that, on account of overproduction and keen competition much business had been done, prior to the consolidation in July last, at prices which afforded no profit, even when it was not done at a loss. Besides, the business of jobbers has been demoralized. The new company was a natural outcome of this state of affairs. There is still competition; the Standard company consolidated but seven firms, and there are five good concerns on the outside. The Standard company have decided, therefore, to curtail production by closing the Astoria plant. The new company have not expected to do much in the way of building up an export trade, to afford an outlet for surplus production. While their machinery may be more improved than that in use in England or Germany, any advantage which might result has been more than offset by the higher rate of wages in the United States.—Since the above was written an advance in price has been announced of 5 cents per piece on plain goods and 10 cents on marbles.—The above company, which is a new Jersey corporation, on December 14

qualified to do business in Ohio. The Ohio headquarters will be at Youngstown, where are located the Ohio Oilcloth Co. works acquired by the company. The legal representative in Ohio of the corporation is Henry H. Garlick, of Youngstown, who is also its president.—The principal headquarters of the company is at No. 320 Broadway, New York.

RUBBER DEPARTMENT OF A CHICAGO HOUSE.

THE Peerless Rubber Manufacturing Co.'s general western agents, from the beginning, have been the large hardware and supply jobbing house of George B. Carpenter & Co. *The Radford Review*, a leading Chicago trade journal, in its November issue devoted nine pages to an illustrated history and description of the Carpenter house, giving ample space to the rubber department, where the Peerless products are handled. The manager of this department is George Hawkinson who has been with the Messrs. Carpenter for fourteen years. The special road salesman for this department is J. Hurd Thompson, who has had an experience of twenty-six years in the rubber trade in the northwest. The corps of salesmen has been increased lately by the addition of George N. LeRoux, employed previously by the Quaker City Rubber Co. (Philadelphia.) The Carpenter house dates from 1840; the number of employes has grown to 285; their latest catalogue cost \$10,000 to publish; they claim to hold the record for the sale of steam packings.

UNITED STATES RUBBER CO.

THERE are rumors in the trade that price lists may be revised slightly on this date, to the extent of raising prices on some items which are, proportionately, too low.—The usual date for declaring dividends on the preferred stock is the first Thursday in January.—Transactions in shares of the United States Rubber Co. on the New York Stock Exchange since our last report have been:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Nov. 23	100	15 3/4	15 3/4	232	52	51
Week ending Nov. 30	1,570	16 3/4	15 1/2	500	53	52
Week ending Dec. 7	2,810	15 1/2	15	1,150	52	51
Week ending Dec. 14	1,360	15	13 3/4	1,130	51 1/4	49
Week ending Dec. 21	4,510	14	12 1/2	735	49 3/4	48 1/4

The New York *Herald* of December 24 printed an interview with Charles R. Flint relative to the market for Rubber stocks. He was asked whether it was true that James R. Keene—a prominent Wall street speculator—and his son in law Talbot J. Taylor, were "angry" at the ways the stocks had declined.

I have no reason to think so [said Mr. Flint.] The decline in United States Rubber was due to the coming of two open winters, when the demand for rubber boots and shoes was cut down, and in the scramble for the reduced business prices were slashed. Mr. Keene appreciates that, I presume. At one time he helped in a campaign to raise the prices of Rubber stocks, and must have made a great deal of money then. Whether he lost on the decline as much as he made on the rise I do not know.

EMPIRE RUBBER SHOE CO. CLOSE.

LAST month was reported [page 85] a petition in bankruptcy against this company, which, since June, had been operating under lease the shoe factory of the Model Rubber Co. (Woonsocket, R. I.) George H. Emmott, of the Morrell Knitting Co. (Woonsocket) was appointed trustee, at the request of the creditors, and on December 18 he surrendered the lease. There has since been talk of the mill being leased again. Indeed, the Woonsocket *Reporter* learns that the purpose of the Atlantic Rubber Shoe Co., the new \$10,000,000 company, is to lease the Model factory. A representative of Morse & Rogers (New

York), large jobbers of shoes and rubbers, is reported to have visited the mill, with a view possibly to leasing it. The assets of the Empire company are reported very small.

CHANGES IN THE RUBBER FOOTWEAR TRADE.

THE business of P. J. McEnroe & Co., selling agents in Chicago of the "Meyer" and "Jersey" brands of rubber footwear, has been consolidated with the western branch of the Lymcoming Rubber Co., of which F. O. Ketterling has been manager hitherto. The combined business will be conducted under the style of The Standard Rubber Shoe Co., with F. O. Ketterling president and treasurer and A. G. Burt secretary, with store and offices at Nos. 240-242 Monroe street.—P. J. McEnroe & Co. have established themselves at No. 148 Franklin street, Chicago, where they will handle the sale of the "Woonsocket" and "Rhode Island" brands of rubber boots and shoes.—Charles B. Allen, who went from the East to Chicago eleven years ago to sell "Woonsocket" rubber boots and shoes, and who has been selling agent there for the United States Rubber Co. since the Woonsocket company was absorbed, after this date will be located at the Boston headquarters of the United States Rubber Co.—still selling "Woonsockets." A dinner was tendered to Mr. Allen, before he left Chicago, by a number of his friends in the local trade.

CALENDARS FOR 1902.

THE first to come to hand this season was that issued yearly by JAMES BOYD & BROTHER, jobbers in mechanical rubbers, of Philadelphia, in which is provided a separate leaf for every week, besides rates of postage, discount tables, and other useful information for the business office.—THE WHITMAN & BARNES MANUFACTURING CO. (Akron, Ohio, and No. 111 Chambers street, New York) issue as usual a calendar printed in large figures, one leaf for each month, in connection with which are advertised their varied line of manufactures, including rubber goods. This calendar merits a repetition of the praise bestowed upon the past issues.—THEODORE HOFELER & CO. (Buffalo, N. Y.) send us a large picture calendar, for hanging on a wall.—LA FAVORITE RUBBER MANUFACTURING CO. (Paterson, N. J.) send a calendar and diary combined, for pocket use—a very convenient booklet.

NEW INCORPORATIONS.

ATLANTIC Rubber Shoe Co., December 18, under New Jersey laws; to manufacture, prepare for market, transport, and market rubber products, and form, promote, and financially assist syndicates and corporations; capital authorized, \$10,000,000, in shares of \$100. The capital to consist of \$2,500,000 in 6 per cent. cumulative preference shares and \$7,500,000 in common stock. After the payment of dividends on the preferred stock, 25 per cent. of any remaining earnings in each year to be set apart as a surplus fund, for the redemption and cancellation of the preferred shares until all these shall have been retired. The principal office and the stockbook to be kept in New Jersey, but the company may transact business in any state or territory or dependency of the United States. The company shall, at least once in each year, cause a shareholder's balance sheet to be prepared, containing information under certain specified headings, the same to be open for inspection, at the company's registered office, by the shareholders in person, for a period of at least seven days before each annual meeting. The certificate of incorporation, instead of being signed by the parties in interest, is signed by the legal representatives of the different interests involved. They are: *Henry M. Rogers*, senior member of Rogers & North, lawyers, Boston; *Francis C. Louthrop*, lawyer, Trenton, New Jersey; *James B. Dill*, the well known corporation lawyer, New York. The registered

office of the company is that of the New Jersey Registration and Trust Co., East Orange, New Jersey. The articles of incorporation were filed with the county court clerk at Newark, N. J., on December 18.

=The American Vulcanized Fibre Co. (New York), December 4, under Delaware laws; capital, \$3,400,000. This corporation is stated to be a combination of all the hard fibre companies in the United States with the exception of two. The companies embraced are:

The Kartavert Manufacturing Co. Wilmington, Delaware.
The Vulcanized Fibre Co. Wilmington, Delaware.
The American Hard Fibre Co. Newark, Delaware.
The Latimer Fibre Co. Boston, Massachusetts.

The incorporators are Richard B. Constance, Frank L. Arnold, and C. Arthur Coon, of New York city, and Gardiner W. Kimball and J. Ernest Smith, of Wilmington. The remaining companies are the Delaware State Fibre Co. (Elsmere, Del.) and the Delaware Hard Fibre Co. (Wilmington.)

=The Shute's "World Renown" Felt and Rubber Footwear Co., December 10, under Maine laws, to manufacture footwear; capital authorized, \$100,000; nothing paid in. C. S. Shute, of Mattapan, Massachusetts, is president; Horace Mitchell, of Kittery, Maine, treasurer.

=The Berry & Hardman Co. (Belleville, New Jersey), December 17, under New Jersey laws, to manufacture a patented rubber heel and other goods; capital, \$20,000. Incorporators: Charles M. Berry, of New York; Herbert V. Hardman and J. Harry Hardman, Belleville, N. J.

=The Airless Pneumatic Tire and Rubber Co., December 10, under New Jersey laws; capital authorized, \$1,000,000, of which \$5000 is paid in. Incorporators: George F. Maguire, Herbert D. Cohen, and Nathan F. Giffin. Office in New Jersey: No. 765 Broad street, Newark.

=Lincoln Rubber Co., December 14, under Maine laws, to make and deal in rubber heels, lifts, and soles; capital, \$50,000. Edward H. Talbot, of Boston, Mass., president; Levi Turner, of Portland, Maine, treasurer and clerk.

TRADE NEWS NOTES.

THE Hood Rubber Co. (Boston) have increased their capital stock to \$800,000.

=The United and Globe Rubber Manufacturing Cos. (Trenton, New Jersey) are erecting a three story addition, 60x78 feet, to their factory buildings.

=The Glendale Elastic Fabrics Co. (Easthampton, Mass.) have installed in their new factory extension nine carloads of machinery from the elastic web factory of J. H. Buckley & Co. (South Norwalk, Conn.), purchased by the Glendale company at the assignee's sale several months ago.

=The Voorhees Rubber Manufacturing Co. (Jersey City, N. J.) have installed recently on their premises, to add to their means of protection against fire, a water tank with 50,000 gallons capacity.

=During the recent smallpox scare in Boston and its vicinity, all the employees of the Fells factory of the Boston Rubber Shoe Co. were required to be vaccinated.

=The People's Hard Rubber Co. (Akron, Ohio), on December 10, according to a local newspaper, had 40 men at work, besides those still employed on the premises by the building contractors, and it was expected that by January 1 the factory would be turning out goods.

=The large rubber factories at Akron, Ohio, in accordance with their custom, and some of the small factories, presented a Christmas turkey to each employee, except that many unmarried persons and some others exercised their option of taking cash. Still, about 2000 turkeys were distributed.

=Work has been begun on the construction of factory buildings for the Stein Double Tire Cushion Co., at Akron, Ohio, under a contract calling for their completion by March 1.

=The Maynard Rubber Corporation, reported in last INDIA RUBBER WORLD, as a new company formed under Connecticut laws, have opened a store at No. 139 Bridge street, Springfield, Mass., where will be carried a general line of rubber goods. The company will make a specialty of the solid rubber tires made by the Hartford Rubber Works Co.

=The Akron manufacturers of rubber balls and other toys say that the holiday trade this season has been the best in their history. "The better known rubber toys become," said one manufacturer, "the more popular they are."

=The contract for the new buildings of the Stoughton (Mass.) Rubber Co., mentioned in the last INDIA RUBBER WORLD, has been awarded to Hosea C. Witt, of the same town. They are to be ready for occupancy by spring.

=The suit for damages of Vincent Tobin against The India Rubber Co. (Akron, Ohio), by whom he was employed, for the loss of a hand in a calender, resulted in a verdict, on November 30, for \$5000.—Frank Hiller has begun suit for \$10,000, at Passaic, New Jersey, against the American Hard Rubber Co., for damages sustained through the breaking of a ladder on which he stood while employed at work in their factory at Butler.

=The mechanical rubber goods business conducted by Winfield S. Knowles (Boston), under the style of Globe Rubber Works, was removed December 1 from No. 72 to No. 60 Pearl street. In the new store is offered a new stock, and a fuller assortment than heretofore. This is the New England agency of the Manhattan Rubber Manufacturing Co. (New York.)

=J. Greenburg, representing the "Goodyear Mackintosh Co.," of Chicago, landed at Joliet, Illinois, recently, rented a store, and began selling at cut prices. The resident merchants complained, and the council met and passed an ordinance, fixing a license for transient merchants of \$75, which Greenburg paid, under protest. He expresses satisfaction, however, over the amount of free advertising that he has got out of the affair.

=William Lapworth & Sons (Milford, Massachusetts) are reported to have ordered \$12,000 worth of new machinery in order to provide for the increased production of elastic webbing necessary to meet their orders.

=Thomas H. Henderson, on leaving the position of foreman of the calendering department of the Boston Woven Hose and Rubber Co. to accept a similar position with Morgan & Wright (Chicago), was presented by the help in the former place with a handsome gold watch chain.

=The rubber factory, to employ 4000 hands, that McKeesport, Pennsylvania, didn't get, last summer, when last heard from was expected to materialize at Arnold, in the same state. It will be necessary first, however, for the citizens of that town to contribute \$20,000. The town of New Kensington also has been threatened with it.

=The Brockton (Mass.) Rubber Cement Scrap Co. advise THE INDIA RUBBER WORLD that during this month they intend to make a change of address, due notice of which will be given as soon as they have decided upon a location. They were the first to make a business of dealing in unvulcanized rubber scrap from the waste of used cement.

=Edmund M. Wood died at Natick, Massachusetts, December 12, in his sixty-fourth year. In addition to many other business interests, he was treasurer of and owned two-thirds of the stock in the George H. Wood Co., large manufacturers of rubber cement.

=Morris & Co. (Yardville, New Jersey) advise THE INDIA RUBBER WORLD that they have received orders from some of the largest mills in the United States for their spring bottom duck baskets, and for their mill trucks as well. The trucks lose none of the spring features, as the wheels are attached to the runners, made from $\frac{1}{4}$ -inch steel, thoroughly braced.

=In the United States district court at Cambridge, Mass., on December 26, H. J. Jaquith was appointed trustee in bankruptcy for the business of F. M. Woodward & Co., rubber manufacturers, at Watertown, Mass.

=The branch store of the Diamond Rubber Co. at No. 1717 Broadway—the headquarters of the company's tire trade in New York—was burned out on December 18. Business was not interrupted, however, since a surplus stock was carried at the company's mechanical goods branch, No. 15 Warren street.

=The record of exports of rubber boots and shoes from the United States for 1900 [see page 105] is brought down only to October 31. Returns have since been received for November, amounting to 295,492 pairs, valued at \$118,663. The total since January 1 was 2,094,501 pairs, against 1,133,473 pairs for eleven months in 1900, and 542,042 pairs in the same period of the year 1899.

=The Chicago Tire and Rubber Co. has been organized, Thomas W. Morris, president, and Charles A. Sandberg, secretary and treasurer. They have built and own a factory on West Kinsie street, and are well equipped to take care of anything in molded rubber goods.

=And now there is an asbestos "combine." The H. W. Johns Manufacturing Co. (New York) and the Manville Covering Co. (Milwaukee, Wis.) have been consolidated, as the H. W. Johns-Manville Co., with \$3,000,000 capital. T. F. Manville will be president, and will come to New York. C. B. Manville will be president and, with C. R. Manville, manager of the Western department, will remain at Milwaukee. H. E. Manville, secretary, will also come to New York. F. R. Boocock, of New York, late of the Johns company, will be treasurer.

BUSINESS EMBARRASSMENT.

THE *Boston News Bureau* reported, December 28: "It is understood that a prominent rubber shoe manufacturing concern in Philadelphia will no longer be a factor in rubber shoe competition, owing to unfortunate affiliations with a former official of the United States Rubber Co." At the New York offices of the latter company, THE INDIA RUBBER WORLD was informed that nothing was known in regard to the affairs of George Watkinson & Co.—the only rubber shoe manufacturers in Philadelphia—further than had appeared in the newspapers. It was stated that Mr. Watkinson had not, at least, become affiliated with the United States Rubber Co.—The New York *Sun* on December 31 reported that George Watkinson & Co. (Philadelphia) were preparing to file a petition in bankruptcy; liabilities mentioned at \$1,000,000 and assets approximately \$1,250,000.—Attachments have been obtained against the Crude Rubber Co. (New York), in favor of banks holding two notes of \$5000 each, made by George Watkinson & Co., and indorsed by the rubber company.

PERSONAL MENTION.

THE tenth anniversary of the wedding of Colonel and Mrs. Harry E. Converse, of Malden, Massachusetts, celebrated on the evening of December 2, was a most enjoyable occasion for all who participated, in spite of the fact that the invitations to the Converse residence for the celebration had to be followed by others, to the Malden Auditorium, on account of an outbreak of measles among the children of the family. Colonel Converse is the son of the Hon. Elisha S. Converse, founder

of the Boston Rubber Shoe Co., and is closely associated with the affairs of that company, in addition to which he is a director in the United States Rubber Co. Mrs. Converse was Miss Mary Parker and is a very popular young matron of Malden.

=Herr Hans T. W. Clouth, a son of the proprietor of the Franz Clouth Rheinische Gummiwaaren-Fabrik (Cologne, Germany), was a recent visitor to the United States, returning to his home just before the holidays.

=George S. Manning, senior member of the Manning Shoe and Rubber Co., a Boston jobbing house, died at his home in Newton, Massachusetts, on December 14, in his fifty-ninth year.

=Clement Studebaker, who died at his home in South Bend, Indiana, on November 27, was a large stockholder and a director in the Mishawaka Woolen Manufacturing Co., manufacturers of rubber and wool "combinations." Mr. Studebaker was born in 1831 in Pennsylvania, where his father was a manufacturer of wagons in a small way. Later Clement Studebaker found himself further west, at South Bend, where he established the great wagon manufacturing business which, in 1868, was incorporated as the Studebaker Brothers Manufacturing Co., with himself as president. A brother, J. M. Studebaker, connected with the wagon manufactory, is also a director in the Mishawaka factory.

=Mr. Charles F. Hirzel, who died November 23 at his residence in Brooklyn, was senior member of the shipping firm of Hirzel, Feltman & Co., of New York. He was a native of Palermo, Italy, and was in his forty second year. Originally engaged in the fruit importing business, Mr. Hirzel's connections increased until his firm had a large South American and Central American trade. For several years they have been included monthly in THE INDIA RUBBER WORLD'S list of importers of crude rubber at New York.

AMERICAN BICYCLE CO. DIVIDED.

IN order to facilitate the division of the business of this company into cycle and automobile branches, two subsidiary corporations have been formed under the laws of New Jersey. The papers were filed December 20. The stock of both companies is held by the American Bicycle Co., but the latter will relinquish active control of the bicycle and automobile businesses. The management will be in the hands of officials of the new concerns, whose names will figure in the trade. The new corporations are:

American Cycle Manufacturing Co.—Capital, \$8,000,000. Incorporators: Joseph E. Bromley, R. Lindsay Coleman, George H. Pope, Thomas E. Merseles. The following factories will be acquired: Pope Manufacturing Co. (Hartford, Conn.), Lozier Manufacturing Co. (Westfield, Mass.), Crawford Manufacturing Co. (Hagerstown, Md.), and these four in Chicago: Ames & Frost Co., A. Featherstone & Co., Gormully & Jeffery Manufacturing Co., Monarch Cycle Manufacturing Co. A deed transferring the Pope works to the new corporation was filed at Hartford December 26, the consideration being supposed to be \$300,000. Mr. Bromley is temporarily president of the new company.

International Motor Car Co.—Capital, \$2,000,000. Incorporators: George H. Pope, R. Lindsay Coleman, Clarence W. Dickerson, Paul Walton. Factories to be acquired: Lozier Manufacturing Co. (Toledo, Ohio), Viking Manufacturing Co. (Toledo, Ohio), Indiana Bicycle Co.—the "Waverley" plant (Indianapolis, Ind.) Colonel G. H. Pope is temporarily president.

The directors of the two companies are identical: Messrs. Bromley, Coleman, Pope, Merseles, and Walton.

PARA STILL LEADS IN RUBBER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of November 1 [page 33] I note the statement that Manáos "has superseded Pará as the most important center of the Brazilian rubber interest." I am sure that this will be unexpected news to the people of both Manáos and Pará. For while it is true that, owing to the new law providing that all rubber produced in the state of Amazonas shall be shipped direct from Manáos, the latter port has gained largely in its export trade, it is not true, and probably never can be, that Manáos "has superseded Pará as the most important center of the Brazilian rubber interest."

It does not follow, because the Amazonas rubber must now be shipped from Manáos, that all the Upriver rubber will also be marketed at that port; quite the contrary, in fact. Pará is still, and doubtless will remain, the great supply depot for the whole Amazon valley. The rubber collectors of the upper river and its tributaries still draw their supplies and get their credits in Pará, and will bring their rubber here in liquidation of their obligations.

But giving Manáos all the benefit of the doubt, and admitting for the sake of argument that the largest possible amount of rubber will hereafter be shipped from that port, it could not possibly exceed one-half the 27,000 tons at which this year's crop is estimated. And, to sum all up, it must always be remembered that the rubber exporters at Manáos are only representatives of the rubber houses at Manáos—branch houses, in other words.

Concerning the financial situation here, it is undeniably true that the hard times have not been exaggerated; indeed, it would be more correct to say that the half has not been told. While it is probably true that the Amazon valley has suffered less from the crisis than other sections of Brazil, yet great distress prevails here, and all forms of public works and enterprises are at a standstill, while there have been scores of failures of people in business and more are expected. The high rate of exchange and the reduced price of rubber has also operated with disastrous effect against the rubber collectors, who thus find their income clipped at both ends, while their expenses remain at the old figure. Perhaps the worst has passed, but among experienced business men here there are two opinions as to that. It is quite true that great areas of good rubber lands are being offered at ridiculously low figures.

For this season, at least, these conditions will not affect the volume of the rubber crop. The collectors and *seringueros* must live, and they hope for a quick return to old conditions, and consequently a big crop may be looked for this season—probably slightly in excess of last season's crop. Already the shipments from Manáos and Pará have been larger by nearly 30 per cent. than in any preceding year at this time, and there are no indications of a falling off in the receipts; though the season may close earlier than usual, owing to the fact that the Upriver crop is coming down nearly two months sooner than customary.

AN AMERICAN.

Pará, Brazil, November 21, 1901.

* * *

ADVICES from another correspondent at Pará are of interest, read in connection with the above letter: "It appears that the authorities in Manáos are becoming convinced that that market is not in a fit condition to cope with the entire upriver crop, in consequence of which the decree, intended to give to Manáos a monopoly of the Upriver trade, is likely to undergo some alteration." Apparently, if Pará is not alarmed, no one else need be on her account.

RUBBER TRADE NOTES FROM EUROPE.

THE Allgemeine Elektrizitäts-Gesellschaft (General Electric Co.), of Berlin, have established at St. Petersburg a branch business under the style of Russische Allgemeine Elektrizitäts Gesellschaft, with a capital of 500,000 rubles (= about \$250,000.)

=At the annual meeting of shareholders of The New Grappler Pneumatic Tyre Co., Limited, in London, on November 25, the accounts presented showed a profit of £4611 2s. 1d. for the preceding twelve months, against a profit of only £2341 for the last seventeen months preceding. The sales during the last year had increased by 40 per cent. It was stated that a good business was being done in motor tires, and that something like 10,000 motor vehicles were now running with "Grappler" tires. A dividend of 5 per cent. on the ordinary shares was declared.

=At the recent general meeting of the Birmingham Pneumatic Tyre Syndicate, Limited, a good year's business was reported, based on an increased sale of tires, especially for use on motors. The company control the "Woodstock" and "Fleetwood" tires. A dividend of 5 per cent. was declared.

=The twenty-first half yearly report of the Amalgamated Society of India-Rubber Workers in England shows a total membership of 406, distributed among six branches as follows: Leyland 136, Birmingham 41, Ancoats 112, Pendleton 51, Chorlton-on-Medlock 28, Newton Heath 38.

=The Goodyear Tire and Rubber Co. (Akron, Ohio) exhibited at the Stanley cycle show, in London, during the last week of November, the entire display of their motor tires that appeared at the recent carriage show in New York.

=A company to be known as Tucks (Ireland), Limited, with £50,000 capital, has been registered in London, for the purpose of acquiring and carrying on the business of Tuck & Co., Limited, at their Dublin branch.

=The *Gummi-Zeitung* mentions a recent conference in Germany, held at the instance of the Reichamt des Innern (department of the interior), in regard to the new rules and laws regulating the process of cold vulcanization of rubber with sulphuric acid. The results have not been divulged, the representative of the government having declared the conference an entirely confidential one. But, inasmuch as a number of the prominent rubber manufacturers took part in the meeting, the *Gummi-Zeitung* assumes that nothing of a burdensome nature will be contained in the new rules. Those who took part were: Senator Maret (Vereinigte Gummiwaren-fabriken, Harburg-Wien), Director Meyer (Ph. Penin A.-G., Leipzig-Plagwitz), Director Spannagel (Vereinigte Berlin-Frankfurt Gummiwaren-fabriken), Dr. K. Metzeler (Act.-Ges. Metzeler & Co., Munich), Dr. Gerlach (Continental Caoutchouc und Guttapercha Co.), Daubitz (Fr. M. Daubitz-Rixdorf), Director Brück (Leipziger Gummiwaren-fabrik A.-G.), Director Rathenau (Allgemeine Elektrizitäts-Gesellschaft).

MANUFACTURED RUBBER.—The Philadelphia *Times* lately contained this paragraph: C. E. Platt, treasurer of the Manufactured Rubber Co., says: "The company is not doing satisfactorily, but we have cut down our expenses to an almost nominal sum, and hope for better business in the early future. Our works at Metuchen, New Jersey, turned out 9000 pounds of manufactured rubber during October. We find that the manufacturers are slow to try new ingredients when they are using their own. The introduction of our one patented compound is therefore somewhat slow, while the competition hampers us in our four or five other products."

THE YIELD OF THE PARA RUBBER TREE.

FROM the notes on this subject already printed in these pages it will have been inferred that the yield of rubber per tree is a widely varying quantity. There is one more element that has not been taken into account—the length of the tapping season. This has been stated by most writers as extending from August to January, inclusive, which would give about six months, the limits being fixed by the division of the year into the rainy and the dry seasons, the rains causing the rivers to rise and rendering the rubber *estradas* less accessible. Otherwise, it might be possible to tap the trees all year. As a matter of fact, there is always some rubber tapping going on. For instance, there will be rubber gatherers up stream who, by reason of improvidence, have not the means, at the end of the regular season, to return home, and they will keep at work during the rainy months, though of course at a disadvantage. Besides, there are localities on some of the upper branches of the Amazon where the rivers do not overflow to the same extent as further down the valley, and here the work of collecting rubber can be continued over a greater part of the year.

From Bolivia and the upper Amazon Mr. Edward C. Hirst brings to THE INDIA RUBBER WORLD the information that a rubber district in which 25 arrobas of rubber can be obtained per *estrada* (100 trees, more or less) in a season (six months) is regarded as a rich field, whereas when the yield does not exceed 10 arrobas per season, the workers cast about for something better. Now an arroba may be 25 pounds or 32 pounds, and an *estrada* may embrace 150 trees or less than 100—so that the yearly yield to be counted upon from the average tree still remains to be figured out. But somehow more rubber is gathered each year, and it would hardly be gathered unless the business afforded a profit for those engaged in it, and, after all, the yield per tree is not a matter of essential importance to anybody now engaged in the trade.

ANOTHER CONGO RAILWAY SCHEME.

THE projected Upper Congo railway is intended to be constructed by a company having a capital of \$5,000,000, reported to be already subscribed; on this the state guarantees a minimum interest of 4 per cent. Besides, dividend shares will be allotted to the Congo Free State, which will be entitled to half of any profits over 4 per cent. The arrangement is really an equal partnership on joint account between the Congo state and the company, both in the railway and in the colonial domain to be developed. The state concedes 40,000 square kilometers in the forests of the Aruwimi region, which area will be increased proportionately with each addition to the capital. The equatorial forests of the Aruwimi river are considered the richest in rubber of all the Congo state's forests, but the density of their vegetation—so graphically described in one of Sir Henry M. Stanley's books—renders the country impossible of penetration without a railway. *L'Independance Belge* (Brussels) estimates that from eight to ten years will be necessary for constructing 900 miles of the proposed road, and the embankment work and track laying will be undertaken under a special arrangement by Congo state troops. Doubtless the success of the Congo railway now in operation below Stanley Pool, has lent encouragement to the idea of further opening up the Congo rubber resources by means of rail communication. The existing road has paid dividends from the beginning and its ordinary shares of 500 francs are quoted on the Brussels bourse at 1570 francs, in spite of the depressed market for securities generally.

RUBBER HOES FOR NEW YORK SCHOOLS.

THERE are teachers who find amusement for themselves and all the world besides in culling from the work of young pupils surprising examples of "English as she is wrote." No doubt equally good examples might at times be found "higher up." In the catalogue of general supplies required this year for the school system of the city of New York—a ponderous document of several hundred pages, supposed to have undergone the scrutiny of several important departments of the city government—are listed some items of rubber goods, from which we quote *verbatim*:

30 Hoes (Fire) $\frac{3}{4}$ inch diameter, 7 feet long.
35 Hoes (Fire) $\frac{3}{4}$ inch diameter, 8 feet long.
50 Hoes (Fire) $\frac{3}{4}$ inch diameter, 9 feet long.
15,000 ft. Hoes, Rubber, with coupling and nozzle, in 25 and 50 feet lengths.

Perhaps these rubber "hoes" are wanted for some new line of work in the kindergarten department.

CAOUTCHOUC OIL FOR USE IN BOILERS.

A CHEMIST in Hanover, Germany, who has carried out a number of trials with caoutchouc oil, is reported to have come to the conclusion that the action of the oil is purely mechanical, it being practically devoid of fatty acids. Anxious to obtain conclusive proof on this point he tested the efficacy of the oil in practical work. The boilers having been cleaned, they were painted over, or sprayed with the oil on the inside, and worked as usual. The same proceeding was repeated a month later. When these were inspected after two months' constant working, the walls of the boilers were found to be entirely free of incrustation; the oil had also effected a removal of the 10 millimeters thick existing deposit. The sludge was dry and easily expelled. All the other working parts of the boilers, such as tubes, valves, etc., were well preserved. With a large boiler he had only used from five to six kilograms of the oil. The daily application of small quantities, say $\frac{1}{2}$ kilogram, he thinks would be an improvement.

THE BALATA MOVEMENT.

EXPORTS from Ciudad Bolivar, November 5, for Europe, were as follows:

Blohm & Co., for Havre.	kilos. 41,308	
Sprick Luis & Co., for Hamburg.	11,604	
Do. for Southampton.	9,294	
Dalton & Co., for Southampton.	20,271	
Pietrantonì & Co., for Hamburg.	9,529	
Montes & Mönch, for Hamburg.	1,445	
E. Hahn, for Hamburg.	1,821	
Pietrantonì Brothers, for Hamburg.	17,116	
Wenzel & Co., for Hamburg.	7,088	110,546
[Total in pounds, 263,001.]		

Exports from Ciudad Bolivar, November 19, for Trinidad by the steamer *Bolivar*:

Blohm & Co., for Havre.	kilos 30,713	
Wenzel & Co., for Hamburg.	8,896	
Dalton & Co., for Southampton.	21,901	
M. Palozzi, for London.	2,303	
Sprick, Luis & Co., for Southampton.	3,842	
A. Battistini & Co., for Genoa.	468	
J. Acqualeta, for Hamburg.	1,820	
Pietrantonì Brothers, for Havre.	13,037	
Pietrantonì & Co., for Hamburg.	7,806	90,786
[Total in pounds, 199,729.]		

The *Venezuelan Herald* (Caracas) of November 17 stated that the exports were made at 1.85 bolivars per pound [=36.7 cents, United States currency.] "A sudden drop is expected in view of the large arrivals expected in Europe for the 20th."

REVIEW OF THE CRUDE RUBBER MARKET.

DURING the month prices have been well maintained at the level of our last published quotations. Buying has been active, considering the nearness to the period of stocktaking, owing to manufacturers' requirements for the large volume of business in hand. Though there were large arrivals from Pará at New York during December, little rubber went into store, being sold for the most part in advance. Advices from the initial markets continue to point to a firmer tendency, and like conditions are reported in the European markets. The year just closed was the banner year for rubber imports into the United States. The custom house figures show larger arrivals than in 1899—which year had held the record until now—and up to November 31 the imports, of all grades, had exceeded the figures for 1900 by 5,786,256 pounds. The greater part of this increase was in Pará sorts, which fact should have tended toward higher price levels, but for a corresponding decline in consumption abroad. Doubtless the rubber industry of Great Britain has been unfavorably affected by conditions growing out of the war in Africa, and Germany is experiencing a general business depression, due evidently to such undue expansion of business on a credit basis as has been known at times in the United States. The world's production of rubber has been maintained, and at the moment a wider range of rubber sources is apparent than at any previous date. The decline in the market for shares in some of the African trading companies, however, would seem to indicate a fear that their large returns cannot continue indefinitely, though any exhaustion in that direction is too remote to affect prices to-day. By the way, large purchases on American account continue to be made at Antwerp, and the steamer *Haverford*, arrived at New York on December 26, carried 250 tons of Congo sorts from the Antwerp auctions of December 10. As for the Pará supply, there still exists a difference of opinion as to the probable outcome of the present season as a whole. A Liverpool firm, already quoted in these pages as predicting a heavy falling off in the Amazon output, and sales at 4s. 6d. [= \$1.09] per pound before the end of 1901, wrote on December 14: "No doubt we anticipated matters somewhat, but now we are very near the realization of our predictions. We are not afraid to say that the decrease for January, February, and March will at the very least be 2000 tons." But meanwhile rubber continues to come forward, and the greater part of the trade appears not to be borrowing trouble from the future. Pará receipts for the latter half of each year have been as follows, except that the record for 1901 is brought down only to December 27:

	1898.	1899.	1900.	1901.
Tons.....	11,230	11,085	10,736	13,190

New York quotations on December 30 were higher:

PARÁ.		Guayaquil, strip.....	
Islands, fine, new.....	@81	Nicaragua, scrap....	@52
Islands, fine, old.....	@83	Mangabeira, sheet....	@43
Upriver, fine, new.....	@85	AFRICAN.	
Upriver, fine, old.....	@86	Tongues.....	@46
Islands, coarse, new.....	@89	Sierra Leone, 1st quality	@65
Islands, coarse, old....	@51	Benguella.....	@49
Upriver, coarse, new....	@67	Cameroon ball.....	@47
Upriver, coarse, old....	@69	Flake and lumps.....	@31
Caucho (Peruvian) sheet	@51	Accra flake.....	@18
Caucho (Peruvian) ball	@57	Accra buttons.....	@49
CENTRALS.		Accra strips.....	@55
Esmeralda, sausage....	@55	Lagos buttons.....	@47

Lagos strips.....	52 @53
Madagascar, pinky....	63 @64
Madagascar, black....	@

Late Pará cables quote:

Per Kilo.		Per Kilo	
Islands, fine.....	5\$000	Upriver, fine.....	5\$700
Islands, coarse.....	2\$500	Upriver, coarse.....	3\$900

Manáos advices, same date:

Upriver, fine.....	5\$500	Upriver, coarse.....	3\$500
Exchange 12 ⁷ / ₁₆ d.			

NEW YORK RUBBER PRICES FOR NOVEMBER (NEW RUBBER.)

	1901.	1900.	1899.
Upriver, fine.....	84 @87	93@97	105 @111
Upriver, coarse.....	63 ¹ / ₂ @66	68@70	84 @ 90
Islands, fine.....	76 ¹ / ₂ @80	89@94	99 @108
Islands, coarse.....	46 ¹ / ₂ @50	52@57	64 @ 70
Cametá, coarse.....	48 @51	55@56	64 ¹ / ₂ @ 70

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 58 William street, New York), advises us as follows:

"During December the demand for paper has been light, as usually at this time of the year a good many banks withdraw from the market, and in consequence of this, and of a firmer money market in general, rates have been strong at 5@6 per cent. for good rubber names, and the smaller ones have been rather neglected."

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.					
	Fine and Medium.	Coarse.	Total 1901.	Total 1900.	Total 1899.
Stocks, October 31....	309 tons	36 =	345	579	230
Arrivals, November.....	1020	385 =	1405	874	1390
Aggregating.....	1329	421 =	1750	1453	1620
Deliveries, November.....	821	394 =	1215	874	1314
Stocks, November 30..	508	27 =	535	579	306

	PARÁ.			ENGLAND.		
	1901.	1900.	1899.	1901.	1900.	1899.
Stocks, October 31....	375	415	537	880	930	495
Arrivals, November...	2645	2172	2600	1055	745	865
Aggregating.....	3020	2587	3137	1935	1675	1360
Deliveries, November.	2610	1977	2777	1050	725	925
Stocks, Nov. 30..	410	610	360	885	950	435

	1901.	1900.	1899.
World's supply, November 30.....	3080	3397	2362
Pará receipts, July 1 to November 30.....	9327	7595	8485
Pará receipts of Caucho, same dates.....	763		
Afloat from Pará to United States, Nov. 30.	325	588	401
Afloat from Pará to Europe, November 30...	925	670	860

Hamburg.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The market during the past week opened firm for Pará sorts with an advancing tendency, due to brisk inquiries. At the end of the week, however, it came to a standstill. For fine Bolivians spot, 8 marks were paid readily, while fine hard cure, for delivery, brought 8.10 marks. A more moderate condition ruled for Bolivian negroheads and Manáos scrappy, which sold at 6@6.10 marks. Fine Mollendo, spot and to arrive, went out of the market at 7.60@6.65 marks. Fine old Mollendo brought 7.80 @7.85 marks. The middle sorts found brisk inquiries, and large transactions were made in Africans, especially Mozambique, Kameruns, and Massais. Sales were made at the following prices, in marks per kilogram;

Mozambique sorts:

Ball, finest red....	7.20@7.35	Sierra Leone twist, fine	5.20@5.25
Ball, fine, red....	7.00	Santos sheet, fine....	4.30@4.35
Ball, good, mixed...	6.25@6.35	Santos sheet, good....	4.00
Ball, good, white...	5.10@5.25	Pernambuco Manga-	
Spindle, fine.....	6.25@6.30	beira.....	3.50@3.60
Spindle, good.....	6.00	Ecuador scrap, fine...	5.60
Spindle, medium,		Colombia scrap, fine..	5.50@5.60
sandy.....	3.50	Guatemala slab, fine..	4.20@4.25
Massal niggers, fine,		Borneo, prime, white.	5.00
red.....	5.85@5.90		

Hamburg, December 3, 1901.

Hamburg advices December 12 show a small decline.

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The principal buyers at the two last inscriptions sales have been American. In the open market about 100 tons have changed hands since December 1, including 60 tons of Lopori. The present stocks embrace about 250 tons, remainder of arrivals by the *Philippeville* (November 21), 100 tons previous arrivals of different origin, and about 200 tons, by the steamer *Stanleyville* which arrived yesterday from the Congo; total, 550 tons, the major part of which is destined for our next inscription sale in January.

E. KARCHER & CO.

Antwerp, Belgium, December 11, 1901.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since the 1st of November sales amount to 122 tons, as follows: On the 5th inst. 34 tons Lopori firsts (valuation \$7.60) at \$7.80 per kilo; 27 tons Lopori seconds (valuation \$5.75) at \$5.95; besides Kassal red, first and second (valuation \$8.25) at \$8.32½; Kassal-Loanda red first, at valuation—\$6.82½; Kassal black from \$7.27½ to \$7.52. These prices are 10¢ per cent. above the last sale. Actual stocks here 728 tons, whereof 436 tons will be offered for sale on the 10th inst.

C. SCHMID & CO.

Antwerp, Belgium, December 6, 1901.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The sale of December 10 passed very quietly, 400 tons out of 430 tons offered being sold at an advance of 4 to 5 per cent. on an average above the last inscription sale of October 31. Among the more important lots sold were:

49 tons Lopori I (valuation 7.25).....	7.52½@7.90
31 " Lopori II (valuation 6).....	6.15 @6.35
37 " Upper Congo ball (valuation 7.15)...	7.30
47 " Equateur (valuation 7.25).....	7.30 @7.25
30 " Upper Congo small strips (valuation 6.45).....	6.45
14 " Mongalla strips (valuation 6.85) ..	6.50
20 " Aruwimi (valuation 5.25).....	5.87½
29 " Upper Congo ball (valuation 7).....	7.12½@7.17½

Actual stocks here about 320 tons. It is reported that the next arrivals from the Congo will be moderate.

C. SCHMID & CO.

Antwerp, Belgium, December 11, 1901.

ARRIVALS AT ANTWERP.

NOVEMBER 21.—By the *Philippeville*, from the Congo:

Bunge & Co. (Domaine privé Etat du Congo) kilos.	132,000
Bunge & Co.....(Société Anversoise)	28,000
Bunge & Co.....(Plantations Lacourt)	5,000
Bunge & Co.....(Comité Spécial Katanga)	3,500
Société ABIR.....	67,000
Comptoir Commercial Congolais.....	27,000
Société Equatoriale Congolaise—Ikémbeba.....	5,000
M. S. Cols.....(Centrale Africaine)	6,500
M. S. Cols.....(Produits Vegetaux du Kassal)	16,000
M. S. Cols.....(Cie. Plantation de Société Lubefu)	10,500
Ch. Dethier.....(Société la Loanjé)	1,000
Ch. Dethier.....(Société Belgika)	2,000
Ch. Dethier.....(La Haute Sangha)	5,000
Société Coloniale Anversoise (Belge du Haut Congo)	30,000
Société Coloniale Anversoise.....(Société Lomami)	29,000
Société Coloniale Anversoise.....(Sud Kamerun)	700
Cie. Commerciale des Colonies.....(La Kassalienne)	2,000
Société pour Commerce Colonial.....(Est du Kwango)	3,000
Crédit Commercial Congolais (M. D'Heygere à Gand)	1,600
	374,800

DECEMBER 12.—By the *Stanleyville*, from the Congo:

Cie. Commerciale des Colonies (La Kassalienne) kilos.	900
Société Coloniale du Banienné.....	102
Cie. Commerciale des Colonies (Cie Française du Congo)	9,530
Société pour Commerce Colonial... (Est du Kwango)	3,500
Société Coloniale Anversoise (Cie. des Mag. Gereraux)	2,106
Ch. Dethier.....(Société Belgika)	7,200
Ch. Dethier.....(Société la Loanjé)	2,500
M. S. Cols.....(Produits Vegetaux du Kassal)	17,000
Société Equatoriale Congolaise.....	3,250
Bunge & Co.....(Plantations Lacourt)	9,117
Bunge & Co.....(Domaine privé Etat du Congo)	60,512
Bunge & Co.....(Société Anversoise)	5,987
Bunge & Co.....(Société Isanghi)	6,552
Société A B I R.....	39,600
Société Coloniale Anversoise.....(Société La Djuma)	12,715
Comptoir Commercial Congolais.....	15,775
Comptoir des Produits Coloniaux..(Cie. des Produits de la Sangha)	1,215 197,561

ANTWERP RUBBER STATISTICS FOR NOVEMBER.

[By courtesy of EMILE GRISOR.]

DETAILS.	1901.	1900.	1899.	1898.	1897.
Stocks, Oct. 30. Kilos	266,105	909,047	148,738	334,651	274,410
Arrivals November.	683,521	473,404	150,196	211,776	113,105
Congo sorts.....	660,897	452,215	120,127	192,877	108,858
Other sorts.....	22,624	21,189	30,069	18,899	4,247
Aggregating...	949,626	1,382,451	298,934	446,427	387,515
Sales November....	106,325	317,805	119,156	176,112	204,300
Stocks, Nov. 30.	843,301	1,064,646	179,778	270,315	183,215
Arrivals since Jan. 1	5,644,282	5,527,900	3,083,520	1,793,722	1,594,274
Congo sorts.....	5,234,931	4,750,277	2,611,717	1,540,634	1,486,842
Other sorts.....	409,351	777,623	471,812	253,088	107,432
Sales since Jan. 1..	5,414,930	4,755,245	3,167,091	1,617,870	1,550,687

Para.

KANTHACK & Co. report [November 23]: "The tone of the rubber market has undergone quite a marked improvement, particularly during the past week, and it may now be said that buyers, for the moment, at least, have entirely ceased to be in any hesitating mood. The competition amongst them has been unusually keen, in consequence of which an advance has taken place, especially for Islands."

The same firm reported later [December 4]: "The pace of the recent upward movement was too vigorous to be kept up, and the rise has given place to a slight reaction during the last week although the tone of the market remains steady at the decline."

German Crude Rubber Imports.

[JANUARY 1 TO SEPTEMBER 30.]

	1898.	1899.	1900.	1901.
Imports.....pounds.	16,715,820	22,830,720	22,523,160	21,246,060
Exports.....	3,902,580	7,777,220	7,353,280	7,695,820
Net Imports.....	12,813,240	15,053,500	15,169,980	13,550,240

SITUATION OPEN.

WANTED.—A competent man who thoroughly understands rubber grinding, compounding and vulcanizing. Steady position to the right man. Address with references, A. B. C., care of THE INDIA RUBBER WORLD. [129]

FOR SALE.

FOR SALE.—One 22×60 Stock and Friction Calender, good as new; used only short time.

One newly new 250 horse power Harris-Corliss engine.

Large Fire Pump, nearly new, and steam and water pipes; little used.

One 2½×10 Devulcanizer Track and Carriage, and one 2½×15 Track and Carriage.

One 12×36 Double Geared Grinder.

One 8×12 Washer.

One large Sturtevant Blower, No. 8. Also, several smaller Blowers.

Lot of Pulleys and Shafting, used only a short time.

PHILIP MCGROVY, Trenton, N. J.

Liverpool.

WILLIAM WRIGHT & Co. report [December 2]: "Fine Para, —The market has been fairly active, and, in spite of increased receipts, the tone at the close is firm, with a fair inquiry.—The total increase in the Pará crop to date is 2100 tons. In spite of this, buying in Pará and Manáos continues strong and active, all available supplies being readily sold at current rates.—The Pará receivers still predict a shortage in receipts during the early months of next year, which, according to them, will more than outbalance present surplus; whether this will prove to be the fact remains to be seen, but certainly the active buying leads one to believe that exporters are afraid that this may be so."

London.

JACKSON & TILL, under date of December 2, report stocks:

	1901.	1900.	1899.
LONDON { Pará sorts..... tons —	—	—	—
Borneo.....	142	217	155
Assam and Rangoon.....	70	31	21
Other sorts.....	457	782	443
Total.....	669	1030	619
LIVERPOOL { Pará.....	890	941	431
Other sorts.....	966	1090	739
Total, United Kingdom.....	2525	3061	1789
Total, November 1.....	2602	3040	1860
Total, October 1.....	2802	2846	1831
Total, September 1.....	2736	3170	1988
Total, August 1.....	2944	3645	1878
Total, July 1.....	3128	3653	2247

[a Corrected.]

PRICES PAID DURING NOVEMBER.

	1901.	1900.	1899.
Pará fine, hard.....	3/5½@3/7½	3/10½@4/1	4/4@4/8
Do soft.....	3/3½@3/5½	3/9½@3/11	4/3½@4/6½
Negroheads, Islands.....	1/11@2/1	2/1½	2/8½
Do scrappy.....	2/8	2/9½@2/10½	3/6½@3/8
Bolivian.....	3/6½@3/7½	No sales.	4/5½@4/7½
Old Upriver.....		4/0½ @4/2	

PARA RUBBER VIA EUROPE.

NOV. 25.—By the <i>Campania</i> =Liverpool:	
Reimers & Co. (Fine).....	32,500
NOV. 29.—By the <i>Majestic</i> =Liverpool:	
George A. Alden & Co. (Fine).....	37,000
A. T. Morse & Co. (Cauchó).....	22,500
Reimers & Co. (Coarse).....	4,500 64,000
DEC. 4.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co. (Fine).....	11,000
Edmund Reeks & Co. (Cauchó).....	10,500
A. T. Morse & Co. (Cauchó).....	8,000 29,500
DEC. 9.—By the <i>Lucania</i> =Liverpool:	
Reimers & Co. (Fine).....	4,500
Reimers & Co. (Coarse).....	5,000
George A. Alden & Co. (Fine).....	11,000
Robinson & Tallman (Fine).....	3,000 64,000
DEC. 12.—By the <i>Teutonic</i> =Liverpool:	
George A. Alden & Co. (Fine).....	10,000
Reimers & Co. (Coarse).....	11,500
Reimers & Co. (Cauchó).....	7,500 29,500
DEC. 16.—By the <i>Etruria</i> =Liverpool:	
Reimers & Co. (Fine).....	10,000
Reimers & Co. (Coarse).....	4,000 14,000
DEC. 20.—By the <i>Germanic</i> =Liverpool:	
Reimers & Co. (Fine).....	33,000
Reimers & Co. (Coarse).....	6,500 19,500

OTHER ARRIVALS AT NEW YORK

CENTRALS.

NOV. 25.—By the <i>Altai</i> =Savannah:	
Kunhardt & Co.....	3,500
D. A. De Lima & Co.....	1,000
Jimenez & Escobar.....	800
For London.....	3,000 8,300

CENTRALS—Continued.

NOV. 25.—By the <i>Louisiana</i> =New Orleans:	
A. T. Morse & Co.....	2,000
A. N. Rotholz.....	1,500
Eggers & Heinlein.....	1,000 4,500
NOV. 27.—By the <i>Alliance</i> =Colon:	
Hirzel, Feltman & Co.....	8,700
Flint, Eddy & Co.....	7,000
G. Amsinck & Co.....	5,300
A. Santos & Co.....	4,200
Dumarest & Co.....	2,300
Crude Rubber Co.....	1,500
Smithers, Nordenholt & Co.....	1,000
Joseph Hecht.....	800
Edward Mauser.....	600
H. Marquardt & Co.....	300 31,700
DEC. 2.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.....	4,000
A. N. Rotholz.....	1,100
Eggers & Heinlein.....	1,500
G. Amsinck & Co.....	600 7,200
DEC. 2.—By the <i>Penrith Castle</i> =Bahia:	
J. H. Rossbach & Bros.....	17,500
G. Amsinck & Co.....	1,000 18,500
DEC. 3.—By the <i>Carib II</i> =Truxillo:	
Eggers & Heinlein.....	10,000
J. W. Wilson & Co.....	3,000
K. Mandell & Co.....	500
H. W. Peabody & Co.....	800
A. S. Lascoll & Co.....	200 14,500
DEC. 3.—By the <i>El Rio</i> =New Orleans:	
A. N. Rotholz.....	1,500
A. T. Morse & Co.....	1,000
Eggers & Heinlein.....	500 3,000
DEC. 4.—By the <i>Athos</i> =Greytown:	
A. P. Strout.....	4,500
Roldan & Van Sickle.....	2,200
Jimenez & Escobar.....	2,000
G. Amsinck & Co.....	1,200
Kunhardt & Co.....	1,200
L. Johnson & Co.....	500
For London, etc.....	3,500 15,100

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

November 29.—By the steamer *Grangense*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauchó.	Total.
A. T. Morse & Co.....	140,800	36,500	138,700	6,200=	322,200
New York Commercial Co.....	129,600	45,700	93,500	8,300=	277,100
Reimers & Co.....	92,200	30,400	44,200	8,000=	174,800
United States Rubber Co.....	91,600	10,500	17,700	.....=	119,800
Boston Rubber Shoe Co.....	73,300	7,100	13,900	21,000=	115,300
Crude Rubber Co.....	69,600	14,500	26,200	600=	110,900
Lawrence Johnson & Co.....	.....	.....	22,800	.....=	22,800
Joseph Banigan Rubber Co.....	.....	.....	.....	9,600=	9,600
Hagemeyer & Brunn.....	5,400	.....	2,000	.....=	7,400
G. Amsinck & Co.....	4,700	300	1,200	.....=	6,200
L. Hageners & Co.....	3,000	.....	1,300	.....=	4,300

Total..... 610,200 145,000 361,500 53,700=1,170,400

December 9.—By the steamer *Bernard*, from Manáos and Pará:

New York Commercial Co.....	139,900	41,400	52,900	5,700=	239,900
A. T. Morse & Co.....	43,600	10,800	50,300	11,100=	115,800
Crude Rubber Co.....	42,400	6,900	16,400	33,800=	99,500
Boston Rubber Shoe Co.....	46,900	7,000	30,200	11,100=	95,200
United States Rubber Co.....	60,800	8,400	13,100	.....=	82,300
Reimers & Co.....	23,500	13,600	33,600	600=	71,300
Lawrence Johnson & Co.....	12,000	1,100	13,300	.....=	26,400
Robinson & Tallman.....	10,700	2,000	2,000	.....=	14,700
L. Hageners & Co.....	2,000	.....	200	.....=	2,200

Total..... 381,800 91,200 212,000 62,300= 747,300

December 20.—By the steamer *Amazonense*, from Manáos and Pará:

A. T. Morse & Co.....	280,800	60,600	124,400	16,300=	482,100
New York Commercial Co.....	196,100	85,400	84,200	1,000=	366,700
Reimers & Co.....	131,000	25,700	54,100	.....=	210,800
Crude Rubber Co.....	124,300	25,900	50,800	1,800=	202,800
United States Rubber Co.....	56,100	7,900	7,500	.....=	71,500
Boston Rubber Shoe Co.....	29,800	4,600	27,600	7,200=	69,200
Lawrence Johnson & Co.....	16,900	10,600	14,700	1,500=	43,700
Robinson & Tallman.....	5,400	1,700	1,200	.....=	8,300
G. Amsinck & Co.....	.....	6,000	600	1,000=	7,600

Total..... 840,400 228,400 365,100 28,800=1,462,700

[NOTE.—The steamer *Gregory*, from Pará, with 600 tons of Rubber and 25 tons of Cauchó for New York, is due January 3.]

CENTRALS—Continued.

DEC. 4.—By Pennsylvania RR.=New Orleans:	
R. F. Cromwell.....	2,200
A. P. Strout.....	1,500
G. Amsinck & Co.....	1,200
Joseph Hecht.....	700
Mosle Brothers.....	400 6,000
DEC. 7.—By the <i>City of Washington</i> =Mexico:	
H. Marquardt & Co.....	2,800
Fred. Probst & Co.....	1,000
Flint, Eddy & Co.....	2,500
E. Siegler & Co.....	500
Thebaud Brothers.....	300
Graham, Hinekey & Co.....	200
For Europe.....	2,000 9,300
DEC. 10.—By the <i>Orizaba</i> =Colon:	
Hirzel, Feltman & Co.....	11,300
Flint, Eddy & Co.....	13,100
W. R. Grace & Co.....	8,000
Frame, Alston & Co.....	4,000
G. Amsinck & Co.....	4,000
A. Santos & Co.....	2,800
Isaac Brandon & Bros.....	1,800
Dumarest & Co.....	1,300
Silva, Bussenius & Co.....	1,300
E. Schettlin & Co.....	1,000
United Fruit Co.....	1,000
Susdorf, Zalde & Co.....	1,000
Jimenez & Escobar.....	800
Joseph Hecht.....	600
A. M. Capen Sons.....	500
H. H. Smythe.....	500
Kunhardt & Co.....	300
Roldan & Van Sickle.....	300
A. P. Strout.....	200
D. N. Carrington & Co.....	200 54,000
DEC. 10.—By Pennsylvania RR.=New Orleans:	
G. Amsinck & Co.....	3,500
A. P. Strout.....	700 4,200
DEC. 12.—By the <i>El Sud</i> =New Orleans:	
A. T. Morse & Co.....	8,500
T. N. Morgan.....	1,000
Eggers & Heinlein.....	500
For Europe.....	1,500 11,500

CENTRALS—Continued.

DEC. 16.—By El Norte=New Orleans:	
A. T. Morse & Co.....	7,000
A. N. Rotholz.....	1,500
DEC. 16.—By the Etruria=Liverpool:	
George A. Alden & Co.....	4,500
Crude Rubber Co.....	4,500
DEC. 16.—By the Pretoria=Hamburg:	
Robinson & Tallman.....	3,300
Reimers & Co.....	700
DEC. 19.—By El Siglo=New Orleans:	
A. T. Morse & Co.....	5,000

AFRICANS.

NOV. 23.—By the Campana=Liverpool:	
Reimers & Co.....	9,000
George A. Alden & Co.....	5,500
Crude Rubber Co.....	3,000
Robinson & Tallman.....	1,500
DEC. 2.—By the Umbria=Liverpool:	
George A. Alden & Co.....	36,000
Crude Rubber Co.....	22,000
Reimers & Co.....	12,000
DEC. 2.—By the Palatia=Hamburg:	
A. T. Morse & Co.....	13,500
Otto Meyer, Boston.....	17,500
Reimers & Co.....	7,000
Robinson & Tallman.....	3,500
DEC. 2.—By the Georgian=Liverpool:	
A. T. Morse & Co.....	77,000
Reimers & Co.....	68,000
DEC. 3.—By the Potsdam=Rotterdam:	
A. T. Morse & Co.....	21,500
DEC. 3.—By La Gascogne=Havre:	
A. T. Morse & Co.....	23,000
Reimers & Co.....	2,500
R. B. Baird.....	500
DEC. 5.—By the Pretorian=Glasgow:	
A. T. Morse & Co.....	55,000
DEC. 7.—By the Pennsylvania=Hamburg:	
George A. Alden & Co.....	11,500
Reimers & Co.....	2,000
Otto Meyer, Boston.....	3,000
DEC. 9.—By the Lucania=Liverpool:	
George A. Alden & Co.....	3,000
Livesey & Co.....	6,000
Crude Rubber Co.....	3,000
Robinson & Tallman.....	2,000
DEC. 11.—By the Southwark=Antwerp:	
George A. Alden & Co.....	52,000
Crude Rubber Co.....	67,000
A. T. Morse & Co.....	1,500
DEC. 13.—By the Teutonic=Liverpool:	
George A. Alden & Co.....	16,000
Crude Rubber Co.....	18,000
Reimers & Co.....	35,000
DEC. 16.—By the Pretoria=Hamburg:	
Otto Meyer, Boston.....	11,500
Reimers & Co.....	4,500

AFRICANS—Continued.

DEC. 16.—By the Etruria=Liverpool:	
George A. Alden & Co.....	17,000
Crude Rubber Co.....	16,000
Livesey & Co.....	11,500
DEC. 16.—By the Canadian=Liverpool:	
A. T. Morse & Co.....	80,000
Reimers & Co.....	50,000
DEC. 17.—By the Vaderland=Southampton:	
George A. Alden & Co.....	9,000
Crude Rubber Co.....	9,000
Reimers & Co.....	4,500
Otto Meyer (Boston).....	22,500
DEC. 19.—By the Amsteldyk=Rotterdam:	
Reimers & Co.....	55,000
DEC. 20.—By the Germanic=Liverpool:	
George A. Alden & Co.....	14,000
Crude Rubber Co.....	12,000
DEC. 21.—By the Phenicia=Hamburg:	
Otto Meyer (Boston).....	10,000
Robinson & Tallman.....	5,000
George A. Alden & Co.....	3,000
Crude Rubber Co.....	3,500

EAST INDIAN.

DEC. 2.—By the Palatia=Hamburg:	
Robinson & Tallman.....	13,500
DEC. 11.—By the Mantou=London:	
Joseph Cantor.....	12,000
DEC. 17.—By the Vaderland=Southampton:	
George A. Alden & Co.....	5,500
Crude Rubber Co.....	5,500
PONTIANAK.	
NOV. 25.—By the Ataka=Singapore:	
George A. Alden & Co.....	190,000
Reimers & Co.....	180,000
William Wright & Co.....	120,000
Robinson & Tallman.....	55,000
NOV. 29.—By the Mogul=Singapore:	
Reimers & Co.....	275,000
George A. Alden & Co.....	190,000
NOV. 29.—By the Miramar=Singapore:	
Robert Brans & Co.....	100,000
Robinson & Tallman.....	85,000
Livesey & Co.....	50,000

GUTTA-PERCHA AND BALATA.

NOV. 29.—By the Miramar=Singapore:	
Robert Soltau.....	10,000
NOV. 30.—By the Philadelphia=Southampton:	
Windmuller & Roelker.....	1,500
DEC. 2.—By the Palatia=Hamburg:	
Robert Soltau & Co.....	11,500
DEC. 7.—By the Pennsylvania=Hamburg:	
Robert Soltau & Co.....	13,500
DEC. 16.—By the Marquette=London:	
T. N. Kreamer.....	3,500

GUTTA-PERCHA—Continued.

BALATA.

DEC. 5.—By the Pretorian=Glasgow:	
Earle Brothers.....	5,000
NOV. 29.—By the Prins Willem II=Surinam:	
George A. Alden & Co.....	500
G. Amsinck & Co.....	500
DEC. 2.—By the Laurentian=Glasgow:	
Earle Brothers.....	2,500
T. N. Kreamer.....	2,200
DEC. 21.—By the Phenicia=Hamburg:	
R. Soltau & Co.....	4,500

CUSTOM HOUSE FIGURES.

PORT OF NEW YORK—NOVEMBER.

Imports:	POUNDS.	VALUE.
India-rubber.....	4,583,370	\$2,366,747
Gutta-percha.....	24,458	15,769
Gutta-jelatong (Pontianak).....	1,637,549	47,501
Total.....	5,245,377	\$2,430,017
Exports:	POUNDS.	VALUE.
India-rubber.....	19,511	\$10,505
Reclaimed rubber.....	294,223	32,676
Rubber Scrap Imported.....	1,493,818	\$99,225

BOSTON ARRIVALS.

	POUNDS.
NOV. 2.—By the Sagamore=Liverpool:	
Reimers & Co.—African.....	7,560
NOV. 4.—By the Storm King=Antwerp:	
Robinson & Tallman.—African.....	7,458
NOV. 5.—By the Friesland=Antwerp:	
George A. Alden & Co.—African.....	59,466
[Included in arrivals at New York, October 29.]	
NOV. 6.—By the Philadelphia=Liverpool:	
Livesey & Co.—African.....	4,899
NOV. 13.—By the Sachem=Liverpool:	
Livesey & Co.—African.....	4,861
NOV. 18.—By the Irishman=Liverpool:	
Livesey & Co.—African.....	7,296
NOV. 22.—By the Haverford=Antwerp:	
George A. Alden & Co.—African.....	78,246
Crude Rubber Co.—African.....	13,263
[Included in arrivals at New York, November 20.]	
NOV. 25.—By the Michigan=Liverpool:	
Reimers & Co.—Five Pará.....	15,000
Reimers & Co.—Caucho.....	45,000
Reimers & Co.—African.....	30,728
Total.....	282,897
[Value, \$160,770.]	
GUTTA-PERCHA.	
NOV. 5.—By the Acilla=Hamburg:	
For Canada.....	940

NOVEMBER EXPORTS OF INDIA-RUBBER FROM PARA.

IN KILOGRAMS. 1000 KILOGRAMS=2204.6 POUNDS.

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Prusse & Co.....	29,070	7,820	20,160	—	66,050	189,210	18,530	23,860	—	231,600	297,650
Frank da Costa & Co.....	196,950	21,552	180,866	8,984	408,352	47,622	5,347	23,692	—	76,661	485,013
Adelbert H. Alden.....	120,670	27,670	90,489	1,053	239,882	60,840	1,980	23,360	—	86,180	326,062
The Sears Pará Rubber Co.....	25,160	2,625	21,360	—	49,145	—	—	—	—	—	49,145
Denis Crouan & Co.....	680	—	9,183	—	9,863	60,692	9,498	20,917	—	91,107	100,970
Neale & Staats.....	8,670	850	10,880	—	20,400	39,625	4,382	2,363	2,996	49,366	69,766
Singleton, Brocklehurst & Co..	—	—	—	—	—	33,860	4,360	1,023	—	39,243	39,243
Kanthack & Co.....	—	—	—	—	—	19,766	2,857	11,244	—	33,867	33,867
Pires, Teixeira & Co.....	2,396	—	762	—	3,158	—	2,018	504	—	2,522	5,680
R. Suarez.....	2,550	—	260	—	2,810	—	—	—	—	—	2,810
Sundry small shippers.....	—	—	—	—	—	2,129	—	2,636	2,050	6,815	6,815
Direct from Iquitos.....	—	—	—	—	—	89,822	7,836	60,125	8,274	166,057	166,057
Direct from Manaos.....	407,443	120,986	92,026	65,936	686,391	357,817	0,418	19,338	177,961	655,534	1,341,925
Total for November.....	793,589	181,503	434,936	75,973	1,486,051	903,401	135,208	209,062	191,281	1,438,952	2,925,003

CABLE ADDRESS,
"GUTTAPERCH, TORONTO."



H. D. WARREN, PRES. & TREAS.
C. N. CANDEE, SECY.

CODES:

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A.B.C. 4TH ED.,
DIRECTORY,
LIEBER'S,
WESTERN UNION,
PRIVATE.

Rubber Belting Packings, Hose and Mechanical Rubber Goods

SOLE MANUFACTURERS IN
CANADA OF

"Kelly-Springfield" Solid Rubber Carriage Tires,
"Maltese Cross" Carbolized Rubber Fire Hose,
"Eureka," "Paragon" and other High Grades Cotton Fire Hose.

"Maltese Cross" and "Lion" Brands Rubber Boots and Shoes.

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OF TORONTO, LIMITED.

49, 61 & 63 WEST FRONT STREET, TORONTO, CANADA.

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GRANBY RUBBER CO.

HIGHEST GRADE

RUBBER BOOTS, SHOES, AND CLOTHING.

Factories: GRANBY, QUEBEC.

S. H. C. MINER, President,
J. H. McKECHNIE, Gen'l Mgr.

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THE CANADIAN RUBBER COMPANY OF MONTREAL.

CAPITAL - - \$1,500,000.

OFFICES AND WAREHOUSES:

223 ST. PAUL STREET.

MONTREAL, CANADA.

- - - Manufacturers of -

Rubber Boots and Shoes, Belting,
Packing, Hose, Carriage Cloth,
Wringer Rols, Etc.

Mention The India Rubber World when you write.



Jenkins Bros.' Valves

are manufactured of the best steam metal, and are fully guaranteed. Why experiment with cheap valves? If you want the **BEST** ask your dealer for valves manufactured by Jenkins Brothers. Remember all genuine are stamped with Trade Mark like cut.

JENKINS BROTHERS, New York, Philadelphia, Chicago, Boston.
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Roofs and iron work properly painted have not required repainting in ten to twenty years. Time only can prove the value of a paint, and Dixon's Silica-Graphite Paint is the **ONLY** graphite paint with a satisfactory time record.

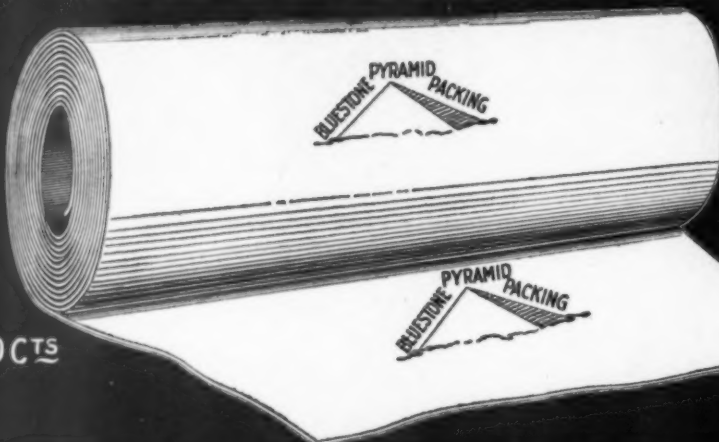
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JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

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PYRAMID BRAND BLUESTONE HIGH PRESSURE PACKING

FOR STEAM &
HOT OR COLD
WATER &
AND AIR &
PACKS EQUALLY
WELL FOR ALL
PRICE PER LB. 80 CTS

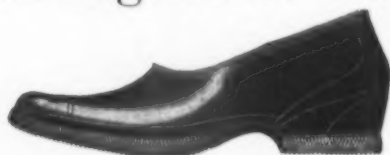


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PACKING MADE
THAT WILL LAST
AS LONG OR WITH-
STAND AS WELL
THE ACTION
OF STEAM
HEAT

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Plymouth Line of
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Now made for Men and Women as well as
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Double Stayed, Double Toe, Double Heel,
Rolled Edge and Extra Quality.

Don't confound this rubber with any ordinary
quality rubber. The Plymouth is extra Quality
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GREAT SELLERS. GREAT WEARERS.

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TYRIAN DRUGGISTS' RUBBER GOODS.

Fountain and Bu'b Syringes,
Water Bottles, Atomizers,
Air Cushions, Urinals, Nipples,
Nursing Bottles, etc., etc.

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